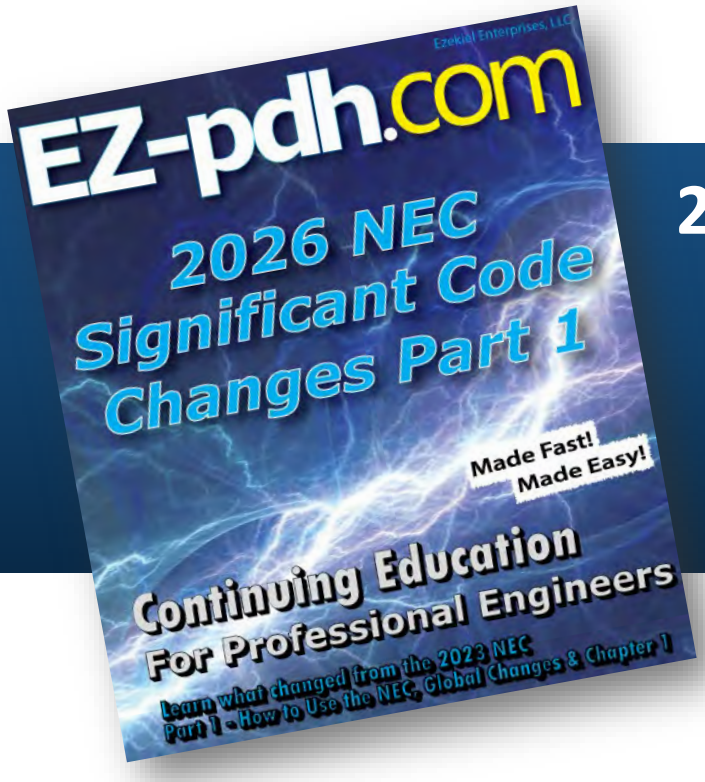

2026 NEC Significant Code Changes Part 1

Four (4) Continuing Education Hours
Course #EE2601

Approved Continuing Education for Licensed Professional Engineers

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Course Description:

The 2026 NEC Significant Code Changes Part 1 course satisfies four (4) hours of professional development. The course is designed as a distance learning course that overviews the significant changes to the updated National Electrical Code (NEC). This first part covers how to use and navigate the NEC, the major global structural changes in the 2026 edition, and the specific changes in Chapter 1 articles including Article 90, Article 100 (Definitions), Article 110 (General Installation Requirements), new Article 120 (Load Calculations, formerly Article 220), and new Article 130 (Energy Management Systems, formerly Article 750).

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:

- Explain how to use and navigate the NEC including scope, mandatory language, code arrangement, and how to identify changes in a new edition
- Identify the global structural changes in the 2026 NEC including new, relocated, and deleted articles and their impact on the code
- Apply the updated Article 90 provisions including the elimination of Chapter 8 independence and revised scope
- Interpret updated and new definitions in Article 100 and apply them to electrical installations and inspections
- Identify the significant changes to Article 110 including new manufacturer instruction requirements, torque requirements, and working space clarifications
- Use new Article 120 for load calculations including DC load provisions, continuous load multiplier clarifications, EV demand factors, and Power Control System load reduction
- Explain the purpose and requirements of new Article 130 Energy Management Systems including monitoring, conductor sizing, documentation, and Power Control System provisions

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

Introduction

Every three years, the National Electrical Code® (NEC®) is revised and expanded. The 2026 edition represents one of the most significant structural overhauls in the code's history. Changes include editorial clarification, expanded requirements, new requirements, deleted requirements, and the relocation of requirements between articles and chapters. Understanding these changes is essential for all electrical professionals.

What to Expect

This course presents an overview of the most significant changes found in the 2026 NEC. Part 1 of a five-part series, it covers how to use the NEC, the global structural changes of the 2026 edition, and Chapter 1 articles.

How to Use the National Electrical Code®

Scope and Application

The NEC covers the installation and removal of electrical conductors, equipment, and wiring in and on public and private buildings, structures, mobile homes, manufactured homes, floating buildings, and recreational vehicles. It also covers yards, marinas, carnivals, parking areas, signaling and communications systems, optical fiber cabling, and — new in 2026 — the export of electric power from electric vehicles (bidirectional charging systems).

The NEC does NOT cover: ships, watercraft, railway rolling stock, aircraft, automotive vehicles other than mobile homes and RVs, underground mines, or installations under the exclusive control of a utility including utility generation, transmission, transformation, and distribution conductors. Determining whether an installation is within the utility's exclusive control or subject to NEC requirements is a common point of contention that the AHJ must resolve based on local regulations and the specific facts of the installation.

The NEC is a **minimum safety standard**. It is not a design specification, installation manual, or instruction guide for unqualified persons. Section 90.1(B) is explicit: the code is not intended as a design specification or instruction manual for untrained persons. The Authority Having Jurisdiction (AHJ) is the organization, office, or individual responsible for enforcing the requirements of the code, or their designated representative.
Under Section 90.4, the AHJ has the authority to:

- Interpret and enforce the requirements of the code
- Approve equipment, materials, installations, and procedures
- Waive specific requirements or permit alternative methods where it is assured that equivalent safety can be achieved (90.4(C) — special permission)
- Require tests or other evidence of compliance

Enforcement and Mandatory Language

Understanding the language of the NEC is critical to its correct application. The code uses specific words with precise, defined meanings:

- **"Shall"** — Mandatory rule. Compliance is required. No exceptions unless specifically stated.
- **"Shall be permitted"** — Permissive rule. This is an option you may choose to use, but it is not required.
- **"Shall not" or "Is not permitted"** — Prohibition. This method or installation is forbidden.
- **"May"** — The AHJ has discretion to grant permission on a case-by-case basis.
- **Informational Notes** — NOT enforceable. They provide context, references to other standards, and explanatory guidance only. They are identified as 'Informational Note' in the code text.
- **Table Footnotes** — ARE mandatory unless the footnote itself is specifically identified as an informational note. Failing to read table footnotes is a common cause of code misapplication.

Under Section 90.4(C), the AHJ may grant **special permission** to waive specific requirements or permit alternative methods when they are satisfied that equivalent safety can be achieved and maintained. Special permission should always be obtained in writing to create a record for future inspectors, owners, and insurance adjusters. A verbal approval that cannot be documented provides no protection to the installer.

The AHJ is not required to grant special permission and may apply the code strictly as written. When special permission is denied and the installer believes the AHJ is incorrect, most jurisdictions have a formal appeal process.

Navigating the NEC Structure

The NEC consists of **9 chapters** plus **12 Informative Annexes**. Understanding the chapter hierarchy is essential to correctly applying the code:

- **Chapters 1–4:** General requirements that apply throughout the entire code. These chapters set the baseline for all electrical installations regardless of

occupancy type.

- **Chapters 5–7:** Specific requirements for particular occupancies, equipment, and conditions. These chapters supplement or modify Chapters 1–8. In 2026, they may now also modify Chapter 8.
- **Chapter 8:** Communications systems — now titled 'Outside and Entering Buildings.' No longer independent; Chapters 5–7 may now supplement or modify Chapter 8.
- **Chapter 9:** Tables for conduit fill, conductor dimensions, and similar calculations. Table footnotes are enforceable.
- **Informative Annexes A–L:** Non-mandatory supplementary material, reference standards, and worked examples.

Within each article, sections are numbered in decimal format (e.g., 250.28). Sections may have first-level subdivisions identified by capital letters (A), (B)..., second-level by numbers (1), (2)..., and third-level by lowercase letters (a), (b)...
The 2026 NEC uses an important **parallel numbering system** where common types of provisions are assigned the same section number in virtually every article:

- .1 — Scope of the article
- .2 — Listing Requirements (newly added throughout in 2026)
- .3 — Reconditioned Equipment (newly added throughout in 2026)
- .10 — Uses Permitted
- .12 — Uses Not Permitted

This parallel structure means that once you learn where to find information in one article, you know where to look in all other articles. The .2 listing requirements and .3 reconditioned equipment provisions are new in 2026 and appear consistently throughout the code.

Using the Index: The alphabetical index at the back of the NEC codebook is the fastest way to find a requirement when you do not know the article number. The Table of Contents provides the big picture by chapter and article. Both should be used regularly.

Identifying Changes in the 2026 Edition

When reading the 2026 NEC, the following margin indicators identify what has changed from the 2023 edition:

- **Shaded or highlighted text** — Revised rule. The shading or highlighting draws attention to changed language. Important caution: not all shaded text is new — some is relocated content that carried over unchanged from another location.
- **Shaded letter 'N' in the left margin** — Entirely new rule, or a rule relocated from another location. Relocated rules are treated the same as new rules and are identified with the N indicator.
- **Bullet point '•' in the left margin** — One or more complete paragraphs were deleted at that location. The bullet only appears when full paragraphs are removed.
- **Partial text deletions** — Identified within the text itself using strikethrough in draft documents, but in the published code they simply appear as the new (shortened) text. No specific margin symbol is used for individual word or phrase removals.

In NFPA Link (the online digital version of the NEC), these same indicators are integrated into the reading experience. When using the digital version, change tracking tools can provide side-by-side comparison of 2023 and 2026 text.

Important caution: *Always verify whether highlighted or shaded text is truly new technical content or simply relocated from another location before assuming a technical requirement has changed. A relocated provision carries the same meaning in its new location as it did in its former one, even though it appears with the N indicator.*

Listed Equipment and Manufacturer Instructions

Section 90.7 establishes that when equipment is listed by a qualified testing organization (UL, ETL, CSA, Intertek, and similar organizations), that listing serves as the basis for AHJ approval. The listing process involves laboratory testing, factory inspection, and ongoing field performance monitoring.

The practical implication: factory-installed internal wiring and construction of listed equipment does NOT need to be re-inspected on site unless the inspector observes

evidence of damage or unauthorized alteration. If the equipment came out of the manufacturer's box listed, its internal construction has already been approved through the listing process.

Section 90.7 also establishes that listed equipment shall be used or installed in accordance with its listing. The listing mark tells you not only that the device has been tested, but for what specific application it was tested. Installing a device outside its listed application — even if it “fits” physically — is a code violation.
New in 2026 — Section 110.3(C): Listed and labeled equipment must be installed in accordance with the manufacturer’s instructions included with the listing or labeling. However, those instructions must not conflict with NEC requirements. AHJs may verify compliance. If following the manufacturer’s instructions would create a code violation, the NEC takes precedence. Manufacturers are effectively required to design their documentation consistent with the NEC.

This provision resolves a long-standing field dispute: what happens when a manufacturer’s installation instructions are less restrictive than the NEC? Prior to 2026, some installers argued that following the listing instructions was sufficient. Section 110.3(C) settles this definitively — the NEC is the floor, and manufacturer instructions cannot lower it.

Global Structural Changes

The 2026 NEC introduced sweeping structural changes that affect how the entire code is organized and navigated. These are not minor editorial adjustments — they represent a fundamental reorganization that reflects the evolution of the electrical industry toward medium-voltage distribution, distributed energy resources, electric vehicle infrastructure, and integrated power-communications systems.

New Articles Added in the 2026 NEC

New – Article 206

Non-Power-Limited Remote-Control and Signaling Circuits

> ***Change at a Glance:*** *New Article 206 provides general requirements for NPLFA wiring, consolidated from former Section 300.26.*

❖ **What Changed:** A new Article 206 was created for Non-Power-Limited Remote-Control and Signaling Circuits. This content was consolidated and clarified from provisions formerly found in Section 300.26. The article provides general requirements for NPLFA (Non-Power-Limited Fire Alarm) wiring, which operates at higher power levels and is distinct from Class 2 and Class 3 limited-energy systems. The article addresses conductor sizing, wiring methods, and overcurrent protection for these higher-power signaling circuits.

❖ **Its Effect:** Having a dedicated article for NPLFA circuits eliminates the ambiguity that arose from referencing Section 300.26 as the governing provision for these circuits. The separation from limited-energy articles makes clear that NPLFA circuits require different installation methods and protections than lower-power Class 2/3 systems. Inspectors and installers can now go directly to Article 206 for these requirements without searching through the general wiring methods article.

New – Articles 265, 266, 267, 268 & 270

Systems Over 1000 Volts — Six New Standalone Articles Replace Article 235

> ***Change at a Glance:*** *Article 235 has been deleted and replaced by five new standalone articles, each mirroring the corresponding Chapter 2 structure*

❖ **What Changed:** Article 235 (Branch Circuits, Feeders, and Services Over 1000 Volts) was deleted and replaced by five new standalone articles: Article 265 (Branch Circuits Over 1000V ac, 1500V dc), Article 266 (Feeders Over 1000V), Article 267 (Outside Branch Circuits and Feeders Over 1000V), Article 268 (Services Over 1000V), and Article 270 (Grounding and Bonding for Systems Over 1000V). Each new article mirrors the corresponding Chapter 2 article for low-voltage systems — Article 265 parallels Article 210 (Branch Circuits), Article 266 parallels Article 215 (Feeders), Article 267 parallels Article 225 (Outside Circuits), Article 268 parallels Article 230 (Services), and Article 270 parallels Article 250 (Grounding and Bonding).

❖ **Its Effect:** The old Article 235 combined all medium-voltage topics into a single, dense article that was difficult to navigate. Electrical professionals working on medium-voltage systems — commercial buildings with primary metering, campus distribution systems, industrial facilities with 4160V or 13.8kV systems — can now find requirements organized the same way they find them for low-voltage systems. This is a significant usability improvement for engineers, designers, and inspectors working in the medium-voltage space.

New – Article 393

Low-Voltage Suspended Ceiling Power Distribution Systems

> ***Change at a Glance:*** *New Article 393 establishes the first dedicated NEC requirements for PoE-type ceiling distribution systems.*

❖ **What Changed:** A new Article 393 establishes requirements for low-voltage suspended ceiling power distribution systems — the bus-track and tap-off systems increasingly used for Power over Ethernet (PoE) lighting and similar low-voltage ceiling distribution in open-plan commercial spaces. The article includes listing requirements, support specifications, and connection methods for these systems. It coordinates with Art. 110.12(A) for workmanship and with Chapter 8 for the

communications aspects of these systems.

❖ **Its Effect:** Previously, low-voltage suspended ceiling power distribution systems had no dedicated article, creating inconsistency in how they were installed and inspected. As PoE lighting and smart building ceiling infrastructure have become common in commercial construction, the lack of specific requirements created uncertainty. Article 393 provides a clear framework and ensures that these systems are listed, properly supported, and correctly connected — important given that they can carry both power and data and are often installed by contractors unfamiliar with electrical codes.

New – Article 512

Cannabis Cultivation Facilities

> ***Change at a Glance:*** *New Article 512 is the first NEC article specifically addressing cannabis cultivation electrical requirements.*

❖ **What Changed:** New Article 512 is the first NEC article specifically addressing cannabis cultivation facilities. It provides guidance on wiring methods, GFCI requirements, and equipment selection for high-humidity, chemical-exposure, heat-intensive, and dusty grow room environments. Requirements address the specific electrical challenges of commercial grow operations including high-intensity lighting systems (HPS, LED, CMH), irrigation and hydroponics, nutrient and chemical storage, and drying/processing areas.

❖ **Its Effect:** Cannabis cultivation facilities present genuine electrical challenges: humidity approaching 100% relative humidity from irrigation and evapotranspiration, chemical exposure from nutrients, cleaning agents, and pesticides creating corrosive environments, significant heat loads from grow lighting requiring elevated ambient temperature considerations for conductor ampacity, and dusty conditions from dried plant material. Article 512 acknowledges these conditions and provides appropriate electrical installation requirements tailored to this industry.

Note: As of the 2026 NEC publication date, cannabis remains a federally controlled substance. Article 512 provides requirements for jurisdictions where cannabis cultivation

is legally permitted.

New – Article 624

Electric Self-Propelled Vehicles (ESVs)

> ***Change at a Glance:*** *New Article 624 covers non-highway electric vehicles separately from highway EVs in Article 625.*

❖ **What Changed:** New Article 624 covers non-highway electric self-propelled vehicles (ESVs) including industrial forklifts, airport ground support equipment (baggage tractors, pushback tugs), golf carts and utility vehicles, warehouse automated guided vehicles (AGVs), electric wheelchairs and mobility scooters, and similar equipment. New definitions include ESVSE (Electric Self-Propelled Vehicle Supply Equipment) for the charging station, and ESVPE (Electric Self-Propelled Vehicle Power Export Equipment) for ESVs capable of exporting power. Article 624 parallels the structure of Article 625 but is specifically scoped to non-highway vehicles.

❖ **Its Effect:** Previously, Article 625 (intended for highway-rated EVs) was applied to industrial vehicle fleets by default — creating inconsistency. The hazards, voltages, charge rates, and infrastructure needs of a warehouse forklift fleet differ significantly from those of passenger vehicle EVSE in a commercial parking garage. Article 624 provides dedicated, tailored requirements for ESV applications, eliminating the interpretive ambiguity and ensuring appropriate protection for these industrial and commercial charging environments.

Relocated Articles

Relocation – Article 220 → New Article 120

Load Calculations Relocated to Chapter 1

> ***Change at a Glance:*** *Article 220 content relocated and restructured into nine parts as new Article 120 in Chapter 1.*

❖ **What Changed:** Article 220 (Load Calculations) was relocated to new Article 120 in Chapter 1. The content was restructured into nine distinct parts: Part I (General Calculation Requirements), Part II (Branch Circuits), Part III (Feeders and Services), Part IV (Optional Calculations for Dwelling Units), Part V (Non-Dwelling Occupancies), Part VI (Optional Calculations for Non-Dwelling Occupancies), Part VII (Health Care Facilities), Part VIII (Mobile/Manufactured Homes), and Part IX (Calculated Load with a Power Control System). New sections include 120.5(D) for DC loads, 120.5(E) for continuous load multipliers, and 120.140(A) for Power Control System load reduction.

❖ **Its Effect:** Placing load calculations in Chapter 1 reflects their foundational importance — every conductor, OCPD, and service in any building is sized from load calculations. Their elevation to Chapter 1 alongside general installation requirements (Article 110) and energy management systems (Article 130) acknowledges that load calculations are not optional or supplementary — they are the starting point for every electrical design. The restructuring into nine clearly labeled parts also improves navigability compared to the former single-part Article 220.

Relocation – Article 750 → New Article 130

Energy Management Systems Relocated to Chapter 1

> ***Change at a Glance:*** *Article 750 relocated and restructured as new Article 130 in Chapter 1, with new Part II for PCS.*

❖ **What Changed:** Article 750 (Energy Management Systems) was relocated to new Article 130 in Chapter 1. The content was restructured with Part I covering general EMS requirements (130.50 General, 130.60 Conductors and Equipment, 130.70 Settings) and a new Part II covering Power Control Systems (PCS) that limit loads on services, feeders, and branch circuits. The PCS terminology replaces the older EMS references in load-limiting contexts throughout the code.

❖ **Its Effect:** Elevating EMS to Chapter 1 signals its foundational importance in modern electrical infrastructure. As distributed energy resources, EV charging, and energy storage systems become standard components of building electrical

systems, the EMS is the mechanism that keeps all of these loads coordinated and within system capacity. The creation of Part II specifically for PCS addresses the load-limiting technology that has been widely deployed in EV charging infrastructure but previously lacked specific NEC provisions.

Relocation – Article 728 → New Article 772

Fire Resistive Cable Systems

> ***Change at a Glance:*** *Article 728 relocated to new Article 772 in Chapter 7 for better organizational alignment.*

❖ **What Changed:** Article 728 (Fire Resistive Cable Systems) was relocated to new Article 772 in Chapter 7. The content is carried forward with updated cross-references to the new limited-energy article structure in Chapter 7. Circuit integrity (CI) cable requirements are now coordinated with the new Articles 720–750 framework.

❖ **Its Effect:** The relocation to Chapter 7 aligns fire resistive cable systems with other cable system articles, improving navigability for engineers and installers working on life-safety circuit integrity requirements. Circuit integrity cables are used in emergency systems (Article 700) and fire alarm circuits (Article 760) — placing them in Chapter 7 alongside these related articles is a more logical organization.

Deleted Articles

Deleted – Articles 770, 805, and 840

Limited-Energy Articles Consolidated into Six New Chapter 7 Articles

> ***Change at a Glance:*** *Articles 770, 805, and 840 deleted; content absorbed into new Arts. 720–750 in Chapter 7.*

❖ **What Changed:** Articles 770 (Optical Fiber Cables), 805 (Communications Circuits), and 840 (Broadband Communications Systems) were deleted in their entirety. Their content was absorbed into six new articles in Chapter 7: Article 720

(General Requirements for Limited-Energy Wiring Methods and Materials), Article 721 (Power Sources for Limited-Energy Systems), Article 722 (Limited-Energy Cables — including optical fiber in Part VII), Article 723 (Raceways, Cable Routing Assemblies, and Cable Trays for Limited-Energy Systems), Article 742 (Overvoltage Protection for Limited-Energy Systems), and Article 750 (Grounding and Bonding for Limited-Energy Systems).

❖ **Its Effect:** All limited-energy installation requirements are now consolidated in Chapter 7, creating a single unified framework. The previously complex cross-referencing between Articles 770, 805, and 840 is eliminated

Note: installers and inspectors no longer need to jump between three articles to determine which cable type, raceway, and grounding method applies to a combined optical fiber/communications/broadband installation. Chapter 8 is also no longer independent from Chapters 1 through 7, reflecting the reality that power and communications systems now routinely share raceways, grounding systems, and equipment spaces.

Deleted – Article 235

Branch Circuits, Feeders, and Services Over 1000 Volts

> ***Change at a Glance:*** *Article 235 deleted and restructured into five new standalone articles (265, 266, 267, 268, 270).*

❖ **What Changed:** Article 235 was deleted in its entirety. Its content was restructured and expanded into five new standalone articles for systems rated over 1000 volts AC or 1500 volts DC: Article 265 (Branch Circuits), Article 266 (Feeders), Article 267 (Outside Branch Circuits and Feeders), Article 268 (Services), and Article 270 (Grounding and Bonding). Additionally, the former Article 395 (Outdoor Overhead Conductors Over 600V)content was incorporated into Article 267.

❖ **Its Effect:** The deletion of Article 235 and creation of five separate articles significantly improves navigability for medium-voltage installations. Each topic is now addressed in a dedicated article that parallels the corresponding Chapter 2 article for low-voltage systems, making it much easier for professionals trained in low-voltage code to apply the same organizational logic to medium-voltage

systems.

Terminology Standardization

Revision – Global — OCPD Terminology

Branch-Circuit Overcurrent Protective Device Replaced Throughout

> ***Change at a Glance:*** *The term OCPD replaces Branch-Circuit Overcurrent Protective Device throughout the 2026 NEC.*

❖ **What Changed:** The term 'Branch-Circuit Overcurrent Protective Device' has been replaced throughout the NEC with the simpler 'Overcurrent Protective Device (OCPD).' A formal definition for OCPD was added to Article 100. New Section 240.7 provides a definitive list of devices that qualify as OCPDs: solid-state circuit breakers, solid-state hybrid circuit breakers, molded-case circuit breakers, low-voltage circuit breakers, Edison-base fuses, cartridge fuses, and other labeled circuit breakers. Supplemental overcurrent protective devices are specifically excluded.

❖ **Its Effect:** The previous term was misleading because overcurrent devices protect services and feeders as well as branch circuits. The formal definition and device list in Section 240.7 establish a clear, consistent standard throughout the 2026 NEC. The explicit exclusion of supplemental overcurrent protective devices is practically significant: equipment that uses supplemental fusing internally does not satisfy the OCPD requirements of the NEC for the branch circuit or feeder serving that equipment.

Revision – Global — Chapter Titles

Special Occupancies/Equipment/Conditions Changed to Specific

> ***Change at a Glance:*** *Chapter 5, 6, and 7 titles updated from Special to Specific; Chapter 8 subtitle added.*

❖ **What Changed:** The chapter titles for Chapters 5, 6, and 7 were updated: 'Special Occupancies,' 'Special Equipment,' and 'Special Conditions' were changed to 'Specific Occupancies,' 'Specific Equipment,' and 'Specific Conditions.' Chapter 8 received the subtitle 'Outside and Entering Buildings.' The chapter titles in the 2026 NEC now read: Chapter 5 — Specific Occupancies; Chapter 6 — Specific Equipment; Chapter 7 — Specific Conditions and Systems; Chapter 8 — Communications Systems Outside and Entering Buildings.

❖ **Its Effect:** The change from 'Special' to 'Specific' better describes the nature of these chapters. They address requirements for specific, defined occupancy types and equipment categories — not unusual or extraordinary conditions. The Chapter 8 subtitle clarifies its scope: covering where outside plant communications systems interface with building wiring systems, which is the demarcation point between utility outside plant and building premises wiring.

Global Listing and Reconditioned Equipment Provisions

One of the most pervasive structural changes in the 2026 NEC is the addition of parallel listing and reconditioning provisions in virtually every article. These new sections appear consistently as XXX.2 (Listing Requirements) and XXX.3 (Reconditioned Equipment) in articles throughout Chapters 1–6.

XXX.2 — Listing Requirements

Equipment covered by a specific NEC article must now be listed. Previously, listing was often implied or inconsistently cross-referenced. The 2026 NEC makes it explicit and consistently located: the .2 section of each article specifies that equipment governed by that article must be listed for its specific application.

XXX.3 — Reconditioned Equipment

A comprehensive framework was added defining what can be reconditioned and reinstalled, and what cannot. This addresses the growing market for reconditioned electrical equipment and provides AHJs with clear guidance for approval or rejection.

Equipment that MAY be reconditioned (with appropriate requirements):

- Switchboards and switchgear — inspection, cleaning, worn component replacement, and current safety standard compliance required
- Low-voltage power circuit breakers — must be tested and meet current performance standards
- Transformers — must be inspected, cleaned, and verified to meet current standards
- Motor control centers (MCCs) — must be labeled as reconditioned and meet current safety standards
- Industrial control panels — with inspection and component replacement as required
- Generators — with appropriate testing and safety standard verification
- Lead-acid storage batteries — with specific restrictions and testing

Equipment that CANNOT be reconditioned (must always be new):

- GFCIs (Ground-Fault Circuit Interrupters) — explicitly prohibited throughout the 2026 NEC
- AFCIs (Arc-Fault Circuit Interrupters) — explicitly prohibited throughout the 2026 NEC
- Energy Storage Systems (ESS) — explicitly prohibited under Section 706.3 due to internal cell degradation not visible externally
- Lithium-ion battery systems — additional restrictions beyond lead-acid; thermal runaway risk from invisible internal degradation

Reconditioned equipment must be clearly labeled as reconditioned using durable, legible marking. The label must be visible after installation and must not obscure the original equipment nameplate — the original nameplate remains. Reconditioned equipment must meet the same safety standards as new equipment and must be inspected, cleaned, and have worn or damaged components replaced to meet current requirements.

Chapter 1 General

Article 90 · Article 100 · Article 110 · Article 120 · Article 130

Chapter 1 establishes the foundational principles and general requirements for all electrical installations. It defines the NEC's applicability, provides key definitions used throughout the code, and sets the general installation requirements that apply regardless of occupancy type or equipment category. The 2026 edition expanded Chapter 1 significantly — new Articles 120 and 130 were relocated here to reflect their foundational importance.

Article 90 — Introduction

Article 90 introduces the entire NEC, covering its purpose, scope, arrangement, and enforcement authority. While Article 90 receives fewer changes than most articles in any given code cycle, the 2026 changes to Article 90 have significant practical impact on how the entire code is applied.

Revision – 90.2(A) and 90.2(B)

Scope — Bidirectional EV Power Export Added

> ***Change at a Glance:*** *The 2026 NEC scope was revised to explicitly include bidirectional EV power export systems.*

❖ **What Changed:** Section 90.2 was revised to explicitly include the export of electric power from electric vehicles within the scope of the NEC. This addresses bidirectional charging systems — V2G (vehicle-to-grid) and V2H (vehicle-to-home) — that export power from an EV's battery back to the building or utility grid. The revision also clarified the distinction between 90.2(A) (what the NEC covers) and 90.2(B) (what the NEC does not cover) to eliminate interpretive overlap between the two subdivisions.

❖ **Its Effect:** As electric vehicles with bidirectional charging capability become more prevalent in the residential and commercial market, the NEC needed to explicitly acknowledge that these systems — which make the vehicle a power

production source when exporting — fall within its scope. A V2H system feeding a dwelling's loads from the vehicle battery creates the same safety considerations as any other power source connected to building wiring. This change coordinates with updated provisions in Article 625 for bidirectional EVSE and with Article 705 for interconnected power production sources.

> 90.2(A) Covered. This Code covers the installation and removal of electrical conductors, equipment, and raceways; signaling and communications conductors, equipment, and raceways; and optical fiber cables and raceways for the following: (1) Public and private premises, including buildings, structures, mobile homes, recreational vehicles, and floating buildings; (2) Yards, lots, parking lots, carnivals, and industrial substations; (3) Installations of conductors and equipment that connect to the supply of electricity; (4) Installations used by the electric utility, such as office buildings, warehouses, garages, machine shops, and recreational buildings, that are not an integral part of a generating plant, substation, or control center; (5) Export of electric power from electric vehicles.

Revision – 90.3

Code Arrangement — Chapter 8 Independence Eliminated

> ***Change at a Glance:*** *Chapters 5 through 7 may now supplement or modify Chapters 1 through 8; Chapter 8 is no longer independent.*

❖ **What Changed:** Section 90.3 was updated to state that Chapters 5 through 7 may now supplement or modify requirements in Chapters 1 through 8. Previously, the language only permitted modification of Chapters 1 through 4. This change eliminates the independence of Chapter 8 (Communications Systems) from the rest of the code. The chapter titles for Chapters 5, 6, and 7 also changed from 'Special' to 'Specific' (Specific Occupancies, Specific Equipment, Specific Conditions and Systems).

❖ **Its Effect:** This change reflects the convergence of power and communications systems in modern buildings. Power over Ethernet luminaires share plenum spaces with power circuit conduit. Smart building automation controllers share mounting rails with power distribution equipment. Structured cabling and power circuits share pathways and grounding systems. Building access control systems are bonded to the same grounding electrode as the 480-volt service. The artificial separation of Chapter 8 from the rest of the code — which prevented Chapter 3 wiring methods and Chapter 1 general requirements from supplementing communications installations without a specific Chapter 8 cross-reference — was no longer logical or practical.

> 90.3 Code Arrangement. Chapters 1 through 4 apply generally; Chapters 5 through 7 apply to specific occupancies, specific equipment, or other specific conditions. These latter chapters supplement or modify the requirements in Chapters 1 through 8. Chapter 9 consists of tables, and Informative Annexes A through L are located after Chapter 9.

Revision – 90.4(C)

Special Permission — Consolidated in One Location

> ***Change at a Glance:*** *Special permission language removed from 90.2 and consolidated exclusively in 90.4(C).*

❖ **What Changed:** The special permission language was deleted from Section 90.2 where it had appeared as a redundant statement. It is now exclusively located in Section 90.4(C), providing one authoritative reference for the AHJ's authority to waive specific requirements or permit alternative methods when equivalent safety can be demonstrated. The AHJ has the authority to waive specific requirements of this Code or permit alternative methods where it is assured that equivalent safety can be achieved and maintained.

❖ **Its Effect:** Having special permission language in two locations (90.2 and 90.4) created redundancy and potential confusion about which provision governed.

Consolidating it in 90.4(C) provides one clear reference point. Special permission should be obtained in writing to create a documented record for future inspectors, owners, engineers, and insurance adjusters. A verbal approval provides no documentation protection.

Note: Special permission is not an entitlement — the AHJ may deny it. When special permission is required for an installation, the designer should approach the AHJ early in the design process, before construction begins, to avoid costly field modifications.

Revision – 90.7

Examination of Equipment for Safety — Factory-Installed Wiring

> ***Change at a Glance:*** *Section 90.7 clarified the basis for AHJ approval of listed equipment and factory-installed wiring.*

❖ **What Changed:** Section 90.7 was revised to clarify that the examination of equipment for safety is accomplished through product listing and labeling by nationally recognized testing laboratories. Factory-installed internal wiring of listed equipment does not require re-inspection at the installation site unless there is evidence of damage, alteration, or improper use. The revision also aligns with the new Section 110.3(C) requirement that manufacturer installation instructions must not conflict with NEC requirements.

❖ **Its Effect:** This provision is the foundation of the AHJ approval process for listed equipment. When an inspector sees a UL or ETL listing mark on equipment, that mark represents hundreds or thousands of hours of laboratory testing, factory inspection, and safety verification. Inspectors are not expected to re-engineer listed equipment — their role is to verify that the equipment is appropriate for the application and that it has been installed correctly. The alignment with Section 110.3(C) reinforces that both the equipment (90.7) and its installation (110.3) must comply with the NEC.

Article 100 — Definitions

Article 100 is where the NEC defines its terms. In the 2026 edition, Article 100 received extensive updates — both revising existing definitions to improve clarity and adding numerous new definitions to address emerging technologies. Understanding these definitions is essential because they control the application of requirements throughout the entire code.
A key structural change: in the 2026 NEC, all definitions previously found within individual articles are being consolidated into Article 100 for easier reference. This process continues with the 2026 edition and will progress further in 2029.

Revision – Article 100

Readily Accessible — Definition Revised

> ***Change at a Glance:*** *Readily Accessible revised to remove awkward phrase and replace with clearer language.*

❖ **What Changed:** The definition of 'Readily Accessible' was revised to remove the phrase 'requiring those to whom ready access is requisite' and replace it with 'requiring ready access to take action.' The revised language is clearer and removes unnecessarily complex phrasing that caused interpretive difficulty in the field. The requirement still addresses the ability to reach equipment quickly for operation, renewal, or inspection without using tools (other than a key), climbing over or removing obstacles, or resorting to portable ladders, chairs, or step stools.

❖ **Its Effect:** The previous definition's awkward phrasing — 'requiring those to whom ready access is requisite'— was confusing and led to varied interpretations. The updated definition clarifies that the concern is whether someone who needs to access the equipment can do so quickly without impediment. This is particularly important in emergency situations where rapid access to a disconnect, OCPD, or other equipment is critical to safety. The definition applies throughout the code wherever 'readily accessible' is used as a location requirement for equipment.

Readily Accessible. Capable of being reached quickly for operation, renewal, or inspections without requiring those to whom ready access is requisite to take actions such as to use tools (other than those provided with or for the equipment), climb over or remove obstacles, or resort to portable ladders, chairs, or step stools.

Deleted – Article 100

Alternate Power Source — Definition Deleted

Change at a Glance: *Alternate Power Source definition deleted to align with NFPA 99 and allow broader terminology.*

❖ **What Changed:** The definition of 'Alternate Power Source' was deleted from Article 100. This aligns with a corresponding deletion in NFPA 99 (Health Care Facilities Code, 2024 Edition). The original definition was added to the NEC primarily for correlation with early editions of NFPA 99, where the term was used to describe backup power for health care essential electrical systems. As NFPA 99 evolved to recognize a wider range of alternative sources including cogeneration, energy storage systems (ESS), and renewable energy integration, maintaining a narrowly defined 'Alternate Power Source' in Article 100 became restrictive.

❖ **Its Effect:** The deletion removes a potentially limiting definition that could have been interpreted to exclude modern backup power technologies such as battery ESS and fuel cells from serving as alternate power sources for health care essential electrical systems. Without the restrictive definition, Articles 700, 701, and 517 can now more readily accommodate the full range of backup power technologies without definitional conflict. This change is particularly significant for healthcare facility designers incorporating ESS as part of a microgrid-based essential electrical system.

New – Article 100

OCPD — Overcurrent Protective Device Formally Defined

Change at a Glance: OCPD formally defined in Article 100; Section 240.7 provides the complete list of qualifying devices.

❖ **What Changed:** A formal definition for 'Overcurrent Protective Device (OCPD)' was added to Article 100. The term replaces 'Branch-Circuit Overcurrent Protective Device' throughout the code. New Section 240.7 provides the definitive list of devices that qualify as OCPDs: solid-state circuit breakers, solid-state hybrid circuit breakers, molded-case circuit breakers, low-voltage circuit breakers, Edison-base fuses, cartridge fuses, and other circuit breakers listed for the application. Supplemental overcurrent protective devices are explicitly excluded from this list and do NOT qualify as OCPDs.

❖ **Its Effect:** The previous term 'Branch-Circuit Overcurrent Protective Device' was misleading because overcurrent devices protect services and feeders as well as branch circuits. The formal definition and qualifying device list in Section 240.7 establish a clear, consistent standard. The explicit exclusion of supplemental overcurrent protective devices is practically significant: equipment using supplemental fusing internally does not satisfy the OCPD requirements for the branch circuit or feeder supplying it. This prevents the misapplication of supplemental devices as substitutes for listed branch circuit overcurrent protection.

> Overcurrent Protective Device (OCPD). A device, such as a fuse or circuit breaker, intended to provide protection from the effects of overcurrent. See 240.7 for the list of qualifying overcurrent protective devices.

New – Article 100

Line-to-Ground, Line-to-Neutral, and Line-to-Line — Voltage Terms Defined

> ***Change at a Glance:*** *Three new voltage terms formally defined to apply uniformly to both AC and DC power systems.*

❖ **What Changed:** Three new voltage terms were formally defined: 'Line-to-Ground,' 'Line-to-Neutral,' and 'Line-to-Line.' These terms are now distinct from each other and apply uniformly to both AC and DC power systems. Previously, these voltage relationships were used throughout the code but not formally defined, leading to inconsistent application particularly when applied to DC systems, ungrounded systems, or non-traditional configurations found in modern energy infrastructure including solar PV, battery storage, and EV charging. The definitions govern voltage thresholds for working clearances (110.26), insulation requirements, GFCI applicability thresholds, and the 150V to ground reference used throughout the code.

❖ **Its Effect:** The formal definitions resolve inconsistency in how voltage relationships were described and applied across different NEC articles. The 150V to ground threshold appears in numerous critical code requirements including GFPE requirements (230.95 for services, 215.10 for feeders), working space requirements (110.26), and GFCI requirements. Having clear, formally defined voltage terms ensures that these thresholds are applied consistently across both AC and DC systems, reflecting the growing prevalence of DC-based power distribution in data centers, EV charging infrastructure, and building-integrated PV systems.

New – Article 100

Cable Tie and Cable Tie Fixing Device

> ***Change at a Glance:*** *Cable ties formally recognized as a cable support system with defined types and UL 62275 alignment.*

❖ **What Changed:** New definitions were added for 'Cable Tie' and 'Cable Tie Fixing Device.' A Cable Tie is a fastening device designed to bundle, secure, or

organize conductors, cables, or other materials. A Cable Tie Fixing Device is a component used to mount or attach a cable tie to a surface. The definitions align with UL 62275 classifications: Types 1, 11, 2, 21, 2S, and 21S are evaluated for cable management applications, while Types 2S and 21S are additionally evaluated for the support and securing of cable, flexible conduit, and flexible tubing. Only Types 2S and 21S are suitable for use as securing devices when supporting cables from structural elements.

❖ **Its Effect:** Cable ties have been used for cable support in electrical installations for decades, but the NEC never explicitly defined them or recognized them as a formal support method subject to listing requirements. The new definitions establish a consistent standard that allows product listings to be evaluated against defined performance criteria. The type designations are important practically: not all cable ties are appropriate for securing conductors and cables from structural supports. Inspectors should be aware that only Types 2S and 21S are evaluated for this securing function — standard cable ties (Types 1, 2) are evaluated for bundling and cable management only, not for structural support.

New – Article 100

Conductive Pavement Heating System

> ***Change at a Glance:*** *New definition distinguishes conductive pavement systems from conventional resistance heating.*

❖ **What Changed:** A new definition distinguishes 'Conductive Pavement Heating Systems' from conventional resistance heating systems and hydronic snow-melting equipment. A Conductive Pavement Heating System uses electrically conductive elements (such as conductive concrete, conductive asphalt, or embedded conductive mesh) embedded in or applied to pavement surfaces to prevent ice formation and melting by direct electrical conduction through the pavement material itself. This is distinct from resistance cable systems (which use resistive wire embedded in concrete or under pavement to generate heat through the wire) and hydronic systems (which circulate heated fluid through tubing beneath the pavement surface).

❖ **Its Effect:** The new definition supports updated requirements in Article 426 for electric deicing and snow-melting equipment. Conductive pavement systems have different electrical characteristics, installation methods, grounding requirements, and control provisions than traditional resistance heating systems. Without a formal definition distinguishing them, there was uncertainty about which Article 426 requirements applied to each technology. The new definition allows Article 426 to address listing and installation requirements appropriate to each technology type.

Revision – Article 100

Counter (Countertop) — Definition Expanded to Include Beverage Surfaces

> ***Change at a Glance:*** *Counter (Countertop) definition expanded to include beverage preparation and serving surfaces.*

❖ **What Changed:** The definition of 'Counter (Countertop)' was expanded to explicitly include beverage preparation and serving surfaces in addition to food preparation surfaces. The 2026 definition now reads: "A fixed or stationary surface typically intended for food preparation and serving, beverage preparation and serving, personal lavation, laundering, or a similar surface that presents a routine risk of spillage of larger quantities of liquids upon outlets mounted directly on or in the surface." This expansion directly impacts receptacle placement requirements in Article 210.52(C) for countertop receptacle outlet locations.

❖ **Its Effect:** The expansion addresses enforcement confusion and product misapplication that occurred when coffee bars, beverage stations, and similar service areas were questioned as to whether they constituted 'countertops' subject to countertop receptacle outlet requirements. By explicitly including beverage preparation and serving surfaces, the 2026 NEC ensures that GFCI protection and receptacle spacing requirements apply consistently to all surfaces where liquid spills are routinely expected — whether in a kitchen, a coffee bar, a hotel suite kitchenette, or a commercial food service area.

Counter (Countertop). A fixed or stationary surface typically intended for food preparation and serving, beverage preparation and serving, personal lavation, laundering, or a similar surface that presents a routine risk of spillage of larger quantities of liquids upon outlets mounted directly on or in the surface.

New – Article 100

Electric Self-Propelled Vehicle (ESV) — Definition and Related Terms

Change at a Glance: *New ESV definition covers non-highway electric vehicles; ESVSE and ESVPE defined for charging infrastructure.*

❖ **What Changed:** A new definition for 'Electric Self-Propelled Vehicle (ESV)' was added to cover non-highway electric vehicles including industrial forklifts, airport ground support vehicles (baggage tractors, belt loaders, pushback tugs), golf carts and resort utility vehicles, automated guided vehicles (AGVs) in warehouses and manufacturing, electric wheelchairs and personal mobility scooters, construction equipment, and recreational electric vehicles. Associated terms also defined include: ESVSE (Electric Self-Propelled Vehicle Supply Equipment) — the equipment that provides electrical energy for ESV charging; and ESVPE (Electric Self-Propelled Vehicle Power Export Equipment) — equipment on an ESV that enables export of electrical energy from the ESV's storage system to the premises wiring.

❖ **Its Effect:** These definitions support new Article 624, which provides dedicated requirements for ESV charging infrastructure. Previously, Article 625 (intended for highway EVs) was the only available framework, and it was applied to industrial vehicle fleets by default. The ESVPE definition anticipates bidirectional capability in industrial vehicles — an emerging technology in warehouse logistics and airport operations where vehicle batteries can serve as energy storage for building peak demand reduction during non-operational periods.

> Electric Self-Propelled Vehicle (ESV). A motorized vehicle not intended to be operated on public roads and propelled by one or more electric motors drawing current from an ESV power supply.

Revision – Article 100

Energy Management System (EMS) — Definition Updated

> ***Change at a Glance:*** *EMS definition updated to acknowledge Power Control System (PCS) as a distinct functional subset.*

❖ **What Changed:** The definition of 'Energy Management System (EMS)' was updated for the 2026 NEC. The definition continues to describe an EMS as a system consisting of monitors, communications equipment, controllers, timers, or other devices that monitor and/or control electrical loads or power production or storage sources. The 2026 update clarifies that a Power Control System (PCS) is a specific type of EMS functionality that actively prevents conductor and equipment overloads — a capability that qualifies a PCS for the load calculation reduction provisions of Article 120.

❖ **Its Effect:** The distinction between an EMS (which may or may not actively prevent overloads) and a PCS (which must actively prevent overloads to qualify for load calculation credit) is now formally recognized. Many jurisdictions and design standards mandate EMS technologies to achieve load flexibility, demand limiting, and renewable energy integration goals. The updated definition ensures that the load-limiting PCS function is clearly distinguished from passive EMS monitoring functions, which do not qualify for conductor and service sizing reductions under Article 120.

> Energy Management System (EMS). A system consisting of any of the following: a monitor(s), communications equipment, a controller(s), a timer(s), or other device(s) that monitors and/or controls an electrical load or a power production or storage source.

New – Article 100

Generator Terminals — Definition Added

> ***Change at a Glance**: Generator Terminals formally defined to distinguish the generator output connection point.*

❖ **What Changed:** A new definition for 'Generator Terminals' was added to Article 100. Generator Terminals are the output connection points on a generator at which the generated electrical power is made available for connection to the premises wiring system. The definition distinguishes the generator terminals from the generator set as a whole, from the generator control equipment, and from the generator output circuit conductors.

❖ **Its Effect:** The formal definition of generator terminals is important for the correct application of grounding and bonding requirements. When a generator is used as a separately derived system, the system bonding jumper is required to connect the grounded conductor to the generator equipment grounding conductor at the generator terminals. When a generator is used as a non-separately derived system (neutral switched), no bonding jumper is installed at the generator terminals. Having a formally defined term for generator terminals eliminates ambiguity about where these connections must be made.

Revision – Article 100

Ground-Fault Circuit Interrupter, GFCI (Class A GFCI) — Revised

> ***Change at a Glance:** GFCI definition revised; Class A designation added as three new SPGFCI classes were created.*

❖ **What Changed:** The definition of 'Ground-Fault Circuit Interrupter (GFCI)' was revised and now includes the parenthetical designation '(Class A GFCI).' The addition of 'Class A' is necessary because the 2026 NEC introduces three new SPGFCI (Special Purpose Ground-Fault Circuit Interrupter) classes (C, D, and E) that had not previously been defined. Class A remains the standard personnel protection device that trips at a

❖ ground-fault current of approximately 4 to 6 milliamperes. The explicit Class A designation distinguishes the familiar standard GFCI from the new specialized classes.

❖ **Its Effect:** The addition of the Class A designation to the standard GFCI definition is an important editorial change that prevents confusion between the familiar GFCI devices used throughout residential and commercial installations and the new specialized SPGFCI classes designed for specific high-risk applications. When the NEC specifies 'GFCI protection' without further qualification, it means Class A GFCI protection — tripping at 4 to 6 milliamperes. When a higher level of protection is required, the code now specifies the applicable SPGFCI class.

New – Article 100

SPGFCI Classes C, D, and E — New Definitions

> ***Change at a Glance:*** *Three new SPGFCI class definitions established for specialized high-protection applications.*

❖ **What Changed:** Three new Special Purpose Ground-Fault Circuit Interrupter class definitions were added: Class C SPGFCI (trips at currents of 20 mA or less and up to 300V ac to ground — for industrial and commercial equipment protection at higher voltages), Class D SPGFCI (designed for 480V to 600V ac systems, offering personnel protection in high-power industrial environments), and Class E SPGFCI (trips at currents below 15 mA for systems exceeding 300V ac to ground — highest level of personnel protection for high-voltage, high-risk environments). Each class addresses a specific voltage range and protection level not covered by the existing Class A (standard) and Class B (pools and marinas) designations.

❖ **Its Effect:** The new SPGFCI class definitions allow the NEC to precisely specify the required level of protection for each application based on the voltage and exposure conditions. Class E, the most protective, is intended for environments where personnel are at elevated shock risk at voltages exceeding 300V ac to ground — such as certain industrial machine tool circuits and high-voltage data center power distribution. The classes coordinate with updated requirements in Articles 210, 680, 625, and industrial equipment articles that now specify which SPGFCI

class is required for particular installation types and voltage levels.

New – Article 100

Power Production Equipment, Interactive Mode, Island Mode

> ***Change at a Glance:*** *Three new definitions support classification and safe operation of distributed energy resource systems.*

❖ **What Changed:** New definitions were added for 'Power Production Equipment,' 'Interactive Mode,' and 'Island Mode.' Power Production Equipment is equipment that generates, converts, or stores electrical energy and is capable of supplying power to premises wiring. Interactive Mode describes operation of power production equipment in parallel with the electric utility supply — as used in grid-tied PV systems, bidirectional EV chargers, and utility-interactive ESS. Island Mode describes operation of power production equipment disconnected from the utility area electric power system — as used in microgrid systems, off-grid solar+storage, and V2H systems operating as a building backup during utility outages.

❖ **Its Effect:** As distributed energy resources become standard components of building electrical systems, consistent terminology is essential for safe design, inspection, and operation. A bidirectional EV charging system operating in interactive mode (parallel with the utility) requires fundamentally different safety provisions than the same system operating in island mode (supporting building loads during a utility outage). Anti-islanding protection prevents unintended island mode operation and protects utility workers from energized lines they believe are de-energized. These definitions provide the vocabulary foundation for the updated provisions in Articles 625, 705, 706, and 710.

New – Article 100

Microgrid Control System (MCS) and Microgrid Interconnect Device (MID)

> ***Change at a Glance:*** *MCS and MID formally defined to support microgrid interconnection provisions in Arts. 705 and 710.*

❖ **What Changed:** New definitions for 'Microgrid Control System (MCS)' and 'Microgrid Interconnect Device (MID)' were added to Article 100. A Microgrid Control System is the system that manages the operation of the microgrid, including control of power production equipment, energy storage systems, loads, and the connection to the utility area electric power system. A Microgrid Interconnect Device is the device that manages the connection and disconnection between the microgrid and the area electric power system, ensuring safe transition between interactive mode and island mode operation.

❖ **Its Effect:** Microgrids are increasingly deployed in commercial buildings, university campuses, industrial facilities, military installations, and critical infrastructure. Formally defining MCS and MID creates a consistent vocabulary for the interconnection provisions in Articles 705 and 710, which govern how distributed generation, storage, and loads interconnect safely with the utility system. The MID is a critical safety device: it must detect the loss of utility power and disconnect the microgrid before transitioning to island mode, preventing back-energization of utility lines that could endanger utility workers during outage restoration.

New – Article 100

Power Control System (PCS)

> ***Change at a Glance:*** *Power Control System formally defined; distinguishes PCS from passive EMS for load calculation purposes.*

❖ **What Changed:** A new definition for 'Power Control System (PCS)' was added to Article 100. A Power Control System is a listed system that monitors current levels and prevents overloading of conductors and equipment by automatically controlling connected loads. Unlike a passive Energy Management System that may only monitor loads, a PCS must actively control loads to prevent overloading — this active control capability is the basis for the load calculation reduction provisions of Section 120.140(A). A PCS must be listed, continuously operating, and capable of responding automatically to actual current levels to qualify for these provisions.

❖ **Its Effect:** The formal definition of PCS is the linchpin of the 2026 NEC's approach to EV charging infrastructure. A building or service cannot accommodate multiple high-power EVSE running simultaneously without exceeding service capacity — but a PCS manages the charging rates dynamically so the total demand stays within capacity. Section 120.140(A) permits the service and conductors to be sized based on the PCS-controlled maximum load rather than the nameplate sum of all chargers. The PCS definition ensures that only listed, actively controlling systems — not passive monitoring systems — can qualify for this benefit.

New – Article 100

Pool — Definition Revised to Distinguish from Natural Bodies of Water

> ***Change at a Glance:*** *Pool definition revised to ensure consistent application of Article 680 protection requirements.*

❖ **What Changed:** The definition of 'Pool' was revised to more clearly distinguish pools (artificially constructed bodies of water used for swimming or similar purposes) from natural bodies of water such as lakes, rivers, and oceans. The revised definition includes swimming pools, wading pools, and hot tubs constructed for human use, and excludes naturally formed bodies of water that are subject to different environmental and safety regulations. The revision coordinates with the consolidated GFCI and equipotential bonding provisions of Article 680.

❖ **Its Effect:** The distinction between pools and natural bodies of water is important for the correct application of Article 680's detailed protection requirements, which include specific GFCI/SPGFCI classes, equipotential bonding

grids, and lighting restrictions. Natural bodies of water are addressed separately in Article 682. The revised pool definition eliminates the ambiguity that could arise when naturally formed ponds or retention basins on a property are used for swimming.

Revision – Article 100

Service Conductors — Definition Clarified

> ***Change at a Glance:*** *Service Conductors definition clarified to distinguish from other conductors originating at power sources.*

❖ **What Changed:** The definition of 'Service Conductors' was clarified to better distinguish service conductors from other conductors that originate at power source terminals. Service conductors are those conductors that originate at the utility's service point and terminate at the service disconnecting means. This distinction is important because Article 230 requirements — which include specific wiring methods, protection requirements, and disconnect provisions — apply only to service conductors, not to all conductors that originate at a power source terminal.

❖ **Its Effect:** The clarification is particularly relevant in installations with generators, transformers used as separately derived systems, and solar PV systems. Output conductors from these sources may originate at power source terminals but are not service conductors and therefore are not governed by Article 230. The revised definition prevents misapplication of service conductor requirements to non-service conductors in complex power systems.

Article 110 — General Installation Requirements

Article 110 contains requirements that apply broadly across the entire NEC. These are the foundational installation requirements that govern every electrical installation regardless of occupancy type, equipment category, or voltage level. Several sections received important updates in 2026.

New – 110.3(C)

Manufacturer Instructions Must Not Conflict with NEC Requirements

> ***Change at a Glance:*** *New Section 110.3(C) resolves the conflict between manufacturer instructions and NEC requirements.*

❖ **What Changed:** A new Section 110.3(C) states that listed and labeled equipment must be installed in accordance with the manufacturer's installation instructions included with the listing or labeling. However, those instructions must not conflict with NEC requirements. AHJs may verify that manufacturer instructions are consistent with the NEC. If following the manufacturer's instructions would create a code violation, the NEC takes precedence. Manufacturers are effectively required to design their documentation consistent with the NEC.

❖ **Its Effect:** This change resolves a long-standing field dispute. In the past, installers and product representatives sometimes argued that following the listing instructions should take precedence over conflicting NEC requirements — claiming that the listing itself implied NEC compliance. Section 110.3(C) settles this definitively: the NEC is the minimum. Manufacturer instructions cannot lower that floor. AHJs can now cite 110.3(C) when manufacturer instructions conflict with code requirements and require code-compliant installation regardless. This provision is particularly relevant for equipment with complex, multi-step installation requirements that sometimes include provisions that conflict with NEC wiring method, clearance, or protection requirements.

110.3(C) Instructions. Equipment intended to be installed in accordance with the instructions included with the listing or labeling of the equipment shall be installed in accordance with such instructions. Such instructions shall not conflict with the requirements of this Code.

Revision – 110.10

Available Fault Current — Documentation Requirements Clarified

Change at a Glance: *Available fault current documentation requirements clarified; circuit impedance removed from scope.*

❖ **What Changed:** Section 110.10 on equipment fault current ratings was revised. The term 'circuit impedance' was removed from the list of factors that must be considered when determining available fault current because circuit impedance is now inherently accounted for in the definition and calculation of available fault current — including it separately was redundant and potentially confusing. The requirement continues to mandate that equipment be rated to interrupt the maximum available fault current at its installation point. Documentation of the available fault current and the date calculated must be field-marked on the service equipment enclosure.

❖ **Its Effect:** Equipment installed with an inadequate Short-Circuit Current Rating (SCCR) is a serious hazard — it can fail catastrophically during a fault, causing fires, arc-flash events, and injuries. The removal of 'circuit impedance' from the requirement simplifies the language without reducing the safety requirement. The field marking requirement ensures that the available fault current calculation is documented and associated with the equipment for future reference during maintenance, renovation, or inspection — when a contractor is adding load or replacing equipment, they need the fault current data to verify the new equipment's SCCR is adequate.

Revision – 110.14

Conductor Terminations — Torque Requirements Mandatory per Listing

> ***Change at a Glance:*** *Aluminum conductor torque requirements now mandatory per equipment listing; identified replaces listed.*

❖ **What Changed:** Section 110.14 on electrical connections was updated in two ways. First, aluminum conductor torque requirements are now mandatory per the equipment listing rather than simply referenced in manufacturer instructions. Second, the term 'listed' was replaced with 'identified' in reference to connection products such as pressure connectors, terminal bars, and splicing connectors. 'Identified' is a defined NEC term that implies the product has been listed, labeled, or otherwise recognized for a specific purpose by a qualified testing laboratory — which is more precise than 'listed' alone.

❖ **Its Effect:** Improperly torqued aluminum conductor terminations are a leading cause of electrical fires. Aluminum expands and contracts approximately twice as much as copper with temperature changes, causing connections to loosen over time if not properly torqued at installation. Under-torqued connections develop high resistance, generating heat that accelerates loosening in a destructive cycle. Making torque requirements mandatory per the equipment listing — not merely advisory — gives inspectors an enforceable basis for requiring torque verification during inspection. The change from 'listed' to 'identified' ensures that connection products can be objectively verified as suitable for the specific application.

Revision – 110.15

High-Leg Marking — Requirements Updated and Clarified

> ***Change at a Glance:*** *High-leg marking requirements updated for clarity in 4-wire delta systems.*

❖ **What Changed:** Section 110.15 on high-leg marking requirements was updated to provide greater clarity. In a 4-wire, delta-connected system, one conductor — the high leg — has a line-to-neutral voltage approximately 1.73 times

higher than the other two phases. For example, in a 240/120V delta system, the high leg is at approximately 208 volts to neutral rather than 120 volts. The high leg must be marked with an orange conductor or orange marking at all termination and connection points including panelboards, switchboards, distribution equipment, and all other locations where the high leg connects.

❖ **Its Effect:** High-leg delta systems are common in older commercial and industrial facilities built when this system type was the norm. Connecting 120-volt equipment to the high leg will damage it immediately due to the 208-volt line-to-neutral potential. The 2026 clarification ensures that the marking requirement is clearly understood to apply at all connection points — not just at the service equipment. This is particularly important in facilities where panelboards and distribution equipment may have been added or modified over time by personnel unfamiliar with the system configuration.

Revision – 110.16

Arc-Flash Hazard Warning — Sections Consolidated and Splices Added

> ***Change at a Glance:*** *Sections 110.16(A) and (B) consolidated; splices added to list of items requiring arc-flash labels.*

❖ **What Changed:** Section 110.16 on arc-flash hazard warnings was revised in two ways. Sections 110.16(A) and 110.16(B) were consolidated to eliminate redundancy and align with NFPA 70E arc-flash safety standards. Additionally, splices accessible to qualified persons were added to the list of items requiring arc-flash warning labels. The existing list — switchboards, switchgear, panelboards, industrial control panels, meter socket enclosures, and motor control centers — now includes accessible splices. The revision also expands the scope beyond service equipment to include feeder-supplied equipment, recognizing that significant arc-flash hazards can exist at feeder disconnect assemblies as well.

❖ **Its Effect:** Accessible splices can expose personnel to significant arc-flash energy, particularly in industrial settings where bus taps, cable splices, and accessible conductors may be encountered during normal operation or maintenance. The requirement for arc-flash labeling on splices ensures that workers are warned of the hazard before opening enclosures or approaching

accessible splice points. The expansion to feeder-supplied equipment recognizes that a large feeder disconnect can present arc-flash hazards comparable to or exceeding those at the service equipment. This change aligns NEC labeling requirements more closely with NFPA 70E, which addresses arc-flash hazards at all voltage levels and equipment types.

Revision – 110.17

Maintenance of Electrical Equipment — Informational Note Revised

> ***Change at a Glance:*** *Informational Note revised to align with NFPA 70B as a stand-alone standard.*

❖ **What Changed:** Section 110.17 on the maintenance of electrical equipment had its Informational Note revised. The note previously blurred the distinction between servicing and maintenance, which has become increasingly relevant with the formal recognition of NFPA 70B (Standard for Electrical Equipment Maintenance) as a stand-alone standard governing the care and maintenance of electrical systems. The revised note clarifies the relationship between NEC installation requirements and NFPA 70B maintenance requirements.

❖ **Its Effect:** The distinction between 'servicing' (restoring equipment to operating condition) and 'maintenance' (systematic care to prevent failures) is important for the application of both NEC Article 110 requirements and NFPA 70B. The revised Informational Note helps electrical professionals understand that the NEC governs the initial installation and is also the reference point for major modifications, while NFPA 70B governs ongoing maintenance programs. For facilities with critical electrical infrastructure — hospitals, data centers, industrial plants — compliance with NFPA 70B is increasingly required by facility standards, insurance, and in some jurisdictions, by code.

Revision – 110.26

Working Space — Doors Open to 90 Degrees; Egress Clarified

> ***Change at a Glance:*** *Working space must be maintained when equipment doors are open or can be opened to 90 degrees.*

❖ **What Changed:** Section 110.26 was revised in two significant ways. First, the parent text was revised to state that the required clear working space must be maintained when such doors are or can be opened 90 degrees. The 24-inch minimum measurement for egress must be maintained with the door fully open, not just in the closed position. Second, the section was revised to require adequate and safe access and egress for electrical workers servicing large electrical equipment that contains overcurrent protection devices, switching devices, or control devices — applicable to both service equipment and feeder disconnect assemblies that meet the size thresholds.

❖ **Its Effect:** This clarification addresses installations where equipment is positioned so that opening the door reduces the usable working space below the required minimum — for example, a panelboard mounted such that its door swings into an adjacent obstruction or directly against the wall when opened to 90 degrees. The 2026 language makes clear that the 36-inch minimum working space depth must be maintained with the door fully open to 90 degrees. Designs for switchboards, motor control centers, panelboards, and large enclosures must now account for door swing arcs and clearance zones to confirm that required egress paths remain unobstructed when doors are opened. The egress requirement expansion to feeder disconnect assemblies ensures that large industrial disconnects receive the same access and egress provisions as service equipment.

Revision – 110.26(A)(1)(b)

Working Space — Low-Voltage Exception Relocated and Broadened

> *Change at a Glance: Former 110.26(A)(1)(b) low-voltage exception relocated as new second sentence in 110.26(A), broadening applicability.*

❖ **What Changed:** The former subdivision 110.26(A)(1)(b) concerning low-voltage systems was relocated as a new second sentence in the parent section 110.26(A). This relocation broadens the applicability of the low-voltage working space exception. The exception permits reduced working space depth if all exposed live parts operate at or below 30 volts RMS, 42 volts peak, or 60 volts DC, subject to special permission. By moving it to the parent section level, this exception now applies more broadly to the working space requirements for both low- and high-voltage installations in the same section.

❖ **Its Effect:** The relocation and broadening of the low-voltage exception ensures consistent application across the full range of equipment covered by 110.26. In previous editions, the exception's placement in a subdivision created ambiguity about whether it applied only to the specific conditions in that subdivision or more broadly to all working space conditions in 110.26. The revised structure resolves this ambiguity and better accommodates the growing range of low-voltage systems — Class 2 circuits, PoE systems, low-voltage control panels — that may be accessible in the working space of larger electrical equipment.

Revision – 110.29

In Sight From — Requirements Expanded Beyond Service Disconnects

> ***Change at a Glance:*** *In Sight From requirements expanded to include feeder disconnect assemblies under Section 225.33.*

❖ **What Changed:** The 'In Sight From' requirements in Section 110.29 were expanded beyond service disconnects to also include feeder disconnect assemblies installed under Section 225.33(A). The 'In Sight From' condition means visible and not more than 15 m (50 ft) distant. Previously, the in-sight requirement was primarily associated with service equipment and motor disconnects. The 2026 revision extends this requirement to feeder disconnect assemblies that meet the criteria of Section 225.33(A).

❖ **Its Effect:** Large multi-disconnect installations using the provisions of Article 225 now clearly fall under the 'In Sight From' requirement, consistent with the safety

principle that personnel working on equipment must be able to see and verify the open position of the disconnecting means. This prevents accidental re-energization during maintenance by an unaware second party. The expansion reflects the growth in large commercial and industrial installations with multiple feeder disconnect points — industrial process facilities, data centers, and large commercial buildings with multiple electrical rooms.

Revision – 110.40 and 110.47

Over-1000V Requirements — In Sight From and Working Space Clarified

> ***Change at a Glance:*** *In Sight From and working space requirements clarified for equipment rated over 1000V up to 2000V.*

❖ **What Changed:** Sections 110.40 through 110.47 cover requirements for installations over 1000 volts. In the 2026 NEC, the In Sight From requirements and working space provisions were clarified for equipment rated at more than 1000 volts nominal but not exceeding 2000 volts nominal connected with metal-enclosed wiring methods. This range covers many industrial distribution systems including 1500V dc systems used in large-scale solar and EV charging installations and 2000V ac distribution in certain industrial applications.

❖ **Its Effect:** The clarification addresses a gap in the previous requirements where equipment in the 1000V to 2000V range with metal-enclosed wiring had unclear working space and in-sight requirements. As 1500V dc systems — used in large solar PV arrays, utility-scale EV charging infrastructure, and industrial dc distribution — become more common, having clear working space and disconnecting means visibility requirements for this voltage range is increasingly important for worker safety.

Article 120 — Load Calculations (formerly Article 220)

Article 220 (Load Calculations) was relocated to new Article 120 in Chapter 1, marking a significant structural change. Load calculations are the starting point for every electrical design — every conductor, OCPD, service, and feeder is sized from load calculations. Their elevation to Chapter 1 reflects this foundational role. The article was restructured into nine distinct parts for improved navigability, and several new provisions address DC loads, EV charging, and Power Control Systems. The nine parts of Article 120 are: Part I (General Calculation Requirements), Part II (Branch-Circuit Load Calculations), Part III (Feeder and Service Load Calculations), Part IV (Optional Calculations for Single-Family Dwellings), Part V (Non-Dwelling Occupancies), Part VI (Optional Calculations for Non-Dwelling Occupancies), Part VII (Health Care Facilities), Part VIII (Mobile and Manufactured Homes), and Part IX (Calculated Load with a Power Control System).

Revision – 120.5(A)

Standard Voltages — New Nominal Voltage Configuration Added

> ***Change at a Glance:*** *The voltage 416Y/240V added to the standard voltage list reflecting industrial and data center applications.*

❖ **What Changed:** Section 120.5(A) on standard voltages was updated to add 416Y/240 volts to the recognized nominal system voltages for load calculations. Although this may seem like a minor textual update, it reflects the growing use of this voltage class in industrial and commercial settings such as data centers and high-density facilities. The 416Y/240V system provides a higher-density power distribution option compared to standard 480Y/277V or 208Y/120V systems, offering advantages in certain high-power applications.

❖ **Its Effect:** Previously, the list of standard voltages in Article 120.5(A) did not include 416Y/240V, even though this voltage configuration was being used in practice. Without a formal listing, designers and inspectors had no standardized basis for load calculations at this voltage. The addition ensures that load calculations for 416Y/240V systems can be performed consistently using the

established Article 120 methodology, providing a code-based framework for this increasingly common power distribution configuration.

Revision – 120.5(C)

Floor Area Calculations — Detached Garages and Unfinished Areas Included

> ***Change at a Glance:*** *Detached garages and unfinished spaces no longer excluded from floor area calculations.*

❖ **What Changed:** Section 120.5(C) on floor area calculations was revised to eliminate the exclusion of detached garages and unfinished spaces from the calculated floor area of dwelling units. Previously, unfinished basements, attached garages, and open porches could be excluded from floor area calculations used to determine general lighting loads. The 2026 NEC removes the exclusion for detached garages and clarifies the treatment of unfinished and unused spaces.

❖ **Its Effect:** This change increases the calculated load for dwelling units that include detached garages and unfinished areas. The rationale is that these spaces are regularly electrified and used by occupants — garages serve as workshops, storage areas, and increasingly as EV charging locations. Excluding them from floor area calculations produced artificially low calculated loads that did not reflect real-world usage. The change ensures that service and feeder sizing accounts for the actual usable area of the property.

New – 120.5(D)

Direct-Current (DC) Loads Formally Addressed

> ***Change at a Glance:*** *New Section 120.5(D) formally codifies DC load calculation methodology.*

❖ **What Changed:** New Section 120.5(D) formally addresses DC loads in load calculation methodology. The provision establishes that DC loads shall be calculated using the actual load in watts or volt-amperes, and that DC currents shall be calculated based on the actual DC voltage of the system. This provides a code-based framework for calculating DC loads on branch circuits, feeders, and services serving DC equipment including solar PV systems, battery storage systems, EV

charging infrastructure, and data center DC power distribution.

❖ **Its Effect:** As DC power distribution becomes increasingly common in commercial and industrial facilities — driven by solar PV, battery storage, EV charging infrastructure, and data center efficiency initiatives — having explicit DC load calculation provisions eliminates the ambiguity that previously required engineers to adapt AC-based methodology to DC applications. The 2026 provision aligns with the growing body of DC-specific requirements throughout the NEC and provides a consistent calculation method for both AC and DC components of modern hybrid power systems.

New – 120.5(E)

Percent Multipliers — 125% Continuous Load Requirement Clarified

> ***Change at a Glance:*** *New Section 120.5(E) distinguishes between load calculation, conductor sizing, and OCPD sizing for continuous loads.*

❖ **What Changed:** New Section 120.5(E) clarifies the application of the 125 percent multiplier for continuous loads — loads expected to operate for 3 hours or more. The section distinguishes between three distinct contexts in which the 125% factor applies: (1) load calculation (the calculated load used to size the service or feeder), (2) conductor sizing (the ampacity required for conductors supplying continuous loads), and (3) overcurrent protection sizing (the OCPD rating for circuits supplying continuous loads). In each context, the 125% factor serves the same purpose — accounting for the additional heat generated by sustained current — but its application differs.

❖ **Its Effect:** This provision resolves a long-standing source of confusion about whether the 125% factor needed to be applied at each step independently or only once. The clarification in 120.5(E) ensures consistent application across load calculations, conductor sizing, and OCPD sizing — particularly important for EV charging infrastructure, where Article 625 now explicitly classifies EVSE loads as continuous and the 125% factor must be applied at all three steps.

Revision – 120.6

Noncoincident Loads — EV and HVAC Simultaneous Operation Addressed

> ***Change at a Glance:*** *Noncoincident loads updated to address EV charging and HVAC simultaneous operation scenarios.*

❖ **What Changed:** Section 120.6 on noncoincident loads was updated to address scenarios where EV charging and HVAC loads might operate simultaneously. The traditional noncoincident load provision allowed the larger of two loads that could not operate simultaneously to be counted — most commonly applied to heating versus cooling equipment that cannot operate at the same time. The 2026 revision recognizes two distinct categories of noncoincident loads: (1) those that physically cannot operate simultaneously due to system design or equipment limitations, and (2) those that are unlikely but potentially can operate simultaneously. The section also clarifies the treatment of motor-driven equipment loads under 120.11(A).

❖ **Its Effect:** As EV charging infrastructure becomes standard in residential and commercial buildings, designers must carefully evaluate whether EVSE loads and HVAC loads are truly noncoincident. Unlike heating and cooling equipment that cannot run simultaneously, EV chargers and air conditioning can and do operate at the same time — particularly during hot summer afternoons when occupants return home and plug in their vehicles. The 2026 clarification prevents the inappropriate application of the noncoincident load allowance to EV-HVAC combinations where simultaneous operation is realistic.

Revision – 120.7(C)

Power Control System — Load Calculations Using PCS

> ***Change at a Glance:*** *Load calculations with a PCS recognized; EMS reference updated to include PCS.*

❖ **What Changed:** Section 120.7(C) was revised to recognize the Power Control System (PCS) in addition to the existing Energy Management System (EMS) for load management purposes. The revision acknowledges that a PCS — which actively

prevents conductor and equipment overloads through real-time current monitoring and automatic load control — is a more specific and capable system than a general EMS that may only monitor loads. Calculations for circuits controlled by a PCS shall be performed in accordance with Article 120 Part IX.

❖ **Its Effect:** The distinction between EMS and PCS matters for load calculations. A passive EMS that only monitors loads without active control cannot justify conductor sizing based on managed (reduced) loads — it provides no protection against overloads. A listed PCS that actively controls loads can justify conductor sizing based on the PCS-managed maximum load under Part IX. This distinction is the foundation of the load reduction provisions in Section 120.140(A).

Revision – 120.13

New Section — General-Purpose Branch Circuits for Lighting

> ***Change at a Glance:*** *New 120.13 preserves minimum general-purpose branch circuit requirements for lighting amid efficiency improvements.*

❖ **What Changed:** New Section 120.13 addresses general-purpose branch circuit requirements for lighting in the context of evolving energy efficiency standards. As LED lighting has dramatically reduced actual lighting loads — a 10-watt LED replacing a 60-watt incandescent delivers the same light output at 1/6 the power — concerns arose that minimum electrical design standards might trend downward, resulting in insufficient branch circuit capacity for future lighting technology or additional loads. Section 120.13 preserves the minimum general-purpose branch circuit requirements for lighting outlets while acknowledging that actual calculated loads may be lower.

❖ **Its Effect:** The creation of 120.13 is a proactive step to preserve the design intent and safety principles behind general-purpose circuit planning. Insufficient branch circuit capacity creates problems when building owners add plug-in loads, task lighting, or upgrade to higher-lumen lighting products. By maintaining minimum circuit standards independent of actual LED load calculations, the NEC ensures that future flexibility is preserved even as immediate loads decrease.

Revision – 120.41

Dwelling Unit Lighting Load — Reduced from 3 VA/ft² to 2 VA/ft²

> ***Change at a Glance:*** *General lighting load for dwelling units reduced from 3 VA per square foot to 2 VA per square foot.*

❖ **What Changed:** Section 120.41 on Dwelling Units Minimum Unit Load was revised to reduce the general lighting load calculation requirement for one-family, two-family, and multifamily dwellings from 3 VA/ft² to 2 VA/ft² (22 VA/m²). This change reflects real-world reductions in lighting loads driven by the widespread adoption of LED lighting technology. Research from Lawrence Berkeley National Laboratory (LBNL) provided data showing that actual lighting loads in modern dwellings are significantly below the 3 VA/ft² standard established decades ago for incandescent lighting.

❖ **Its Effect:** The reduction from 3 VA/ft² to 2 VA/ft² reflects an important industry reality: modern LED fixtures consume dramatically less power than the incandescent and halogen fixtures that drove the original 3 VA/ft² standard. For a 2,000 square foot dwelling, this reduces the general lighting load component from 6,000 VA to 4,000 VA — a meaningful reduction that more accurately reflects actual modern usage. While this reduction may slightly reduce calculated service sizes in some cases, the simultaneous addition of EV demand factors to the calculation methodology offsets or exceeds this reduction for most modern dwellings.

Revision – 120.42

Non-Dwelling Occupancy Lighting Loads — Table Note Clarified

> *Change at a Glance: Table 120.42(A) table note identifying 125% of continuous load removed; addressed in 120.5(E).*

❖ **What Changed:** Section 120.42 on lighting load for non-dwelling occupancies was revised by removing the table note in Table 120.42(A) that identified VA values as including 125% of the continuous load. The continuous load multiplier is now addressed separately in Section 120.5(E), which covers percent multipliers in a unified manner. The removal eliminates duplication and potential confusion about

whether the 125% factor was already embedded in the table values or needed to be applied in addition to them.

❖ **Its Effect:** The previous table note was a persistent source of confusion for electrical designers. Some interpreted the note to mean that the 125% factor was already incorporated into the VA/ft^2 values, making it unnecessary to apply the factor separately. Others applied the 125% factor as an additional multiplier on top of the table values, resulting in double-counting. The 2026 revision resolves this by removing the ambiguous note and addressing the continuous load multiplier consistently in Section 120.5(E) — one section, one treatment, no ambiguity.

Revision – Table 120.54

Electric Clothes Dryers — Demand Factors Revised

> ***Change at a Glance:*** *Table 120.54 demand factors revised based on current usage data from Lawrence Berkeley National Laboratory.*

❖ **What Changed:** Table 120.54 on electric clothes dryer demand factors was revised based on updated usage data. The revised demand factors reflect decreasing simultaneous use as the number of dryers increases, based on research from Lawrence Berkeley National Laboratory (LBNL) that better reflects the actual usage patterns of electric clothes dryers in modern multifamily residential installations. The updated demand factors enable designers to apply decreasing demand factors as the number of dryers increases, recognizing that all dryers are unlikely to be used simultaneously in large multifamily buildings.

❖ **Its Effect:** The previous demand factors for electric clothes dryers in multifamily buildings were based on usage data that was decades old and did not reflect modern usage patterns — including the impact of more energy-efficient dryers, time-of-use electricity pricing, and the different scheduling behaviors of modern apartment dwellers compared to earlier generations. Updated demand factors provide more accurate load calculations for apartment buildings and condominiums with in-unit dryers, preventing both undersizing (which creates hazards) and unnecessary oversizing (which increases construction costs).

Revision – 120.82 and 120.83

Single-Family Dwelling Optional Calculation — Updated with EV Demand Factors

> ***Change at a Glance:*** *New single-family optional calculation method includes EV charging demand factors in Table 120.83.*

❖ **What Changed:** Sections 120.82 and 120.83 introduce an updated optional calculation method for single-family dwellings. The significant addition is that EV charging loads now have their own demand factor table — Table 120.83 — and must be factored into service sizing for new construction. Table 120.83 provides demand factors based on the number of EVSE and their rated amperes, recognizing that multiple EVSE in a single-family dwelling are unlikely to all charge simultaneously at their full rated current throughout the peak demand period.

❖ **Its Effect:** The rapid adoption of home EV charging requires that load calculations account for EV infrastructure. A family with two electric vehicles and two Level 2 chargers rated at 48 amperes each represents a potential additional load of 23 kW at 240V — larger than most other individual loads in a single-family dwelling. Table 120.83's demand factors provide a realistic basis for service sizing that accounts for diversity in charging behavior. The optional calculation method using Table 120.83 may allow smaller service sizes than the standard method while still providing adequate capacity for realistic simultaneous EV charging loads.

Revision – 120.84

Multifamily Dwelling Optional Calculation — EV Loads and Restructured

> ***Change at a Glance:*** *120.84 restructured and updated to incorporate EV charging demand factors for multifamily dwellings.*

❖ **What Changed:** Section 120.84 on multifamily dwelling load calculations was restructured and revised to incorporate EV charging loads using Table 120.84(C) demand factors. Previously, Section 120.84(A) was a single paragraph covering the conditions for using the optional calculation. The 2026 revision splits this into multiple subdivisions for clarity: general conditions, general lighting and receptacle loads (now calculated using 2 VA/ft^2 aligned with the dwelling unit reduction in

120.41), and new EV demand factors in Table 120.84(C). The optional calculation also incorporates updated demand percentages reflecting modern energy use patterns.

❖ **Its Effect:** As EV charging infrastructure becomes standard in apartment buildings and condominiums — driven by tenant demand, zero-emission vehicle requirements in many jurisdictions, and the practical reality that residents cannot charge at home without it — electrical services must be designed to accommodate these loads. The demand factors in Table 120.84(C) provide a code-based basis for multifamily EV infrastructure planning that accounts for the diversity factor in a building where not all units will charge simultaneously at maximum rate. Without these demand factors, designers would need to apply nameplate ratings for every charger, potentially requiring service upgrades that far exceed realistic demand.

Revision – 120.111 and Table 120.111

Patient Care–Related Electrical Equipment — Demand Factors Updated

> ***Change at a Glance:*** *Table 220.110 retitled and updated; demand factor provisions restructured for health care facility loads.*

❖ **What Changed:** Table 120.111 (formerly Table 220.110) on demand factors for patient care-related electrical equipment in health care facilities was retitled and updated. The table retains the fundamental demand factor approach: the first 10 circuits are calculated at 100% of their total connected load, and any additional circuits beyond 10 are derated to 30% of their total connected load. The 2026 revision restructures the section to improve clarity and aligns with the updated essential electrical system provisions of Article 517.

❖ **Its Effect:** Health care facilities present some of the most complex electrical load calculation challenges. Patient care areas may have dozens of circuits supplying medical equipment, lighting, receptacles, and monitoring systems. The 10-circuit at 100% plus derating approach recognizes that while individual circuits may not be fully loaded at any given time, a minimum base load must be maintained for the first 10 circuits regardless. The restructuring improves usability without changing the underlying calculation methodology that health care electrical

designers are familiar with.

New – 120.140(A)

Power Control Systems — Load Reduction Formally Permitted

> ***Change at a Glance:*** *Section 120.140(A) permits conductor and OCPD sizing based on PCS-controlled maximum load.*

❖ **What Changed:** New Section 120.140(A) formally permits Power Control Systems (PCS) to reduce calculated loads on services, feeders, and branch circuits. When a listed PCS is installed and continuously operating to prevent overloading, conductors and OCPDs may be sized based on the maximum load that the PCS will allow on that circuit rather than the sum of all connected nameplate loads. The PCS must be a listed device, must be continuously operating, and must be capable of automatically adjusting loads to prevent overloading based on actual current monitoring. The applicable PCS requirements are in Article 130, Part II.

❖ **Its Effect:** This provision is the practical implementation of the PCS concept throughout the code. Consider a commercial building with 20 Level 2 EVSE rated at 48A each — the nameplate sum is 960A of continuous load, requiring a massive service upgrade. A PCS manages charging rates dynamically, ensuring total EVSE demand never exceeds a set maximum (say, 400A). With a listed PCS meeting Article 130 requirements, the EVSE circuits and service can be sized for the 400A PCS-controlled maximum rather than the 960A nameplate sum. This provision makes EV charging infrastructure economically feasible in existing buildings with limited service capacity.

Note: The PCS must comply with all requirements of Article 130, Part II. The load reduction benefit applies only while the PCS is continuously operating. If the PCS fails, is disabled, or is bypassed, the conductors and equipment must still be capable of safe operation. Some jurisdictions require a documented PCS failure mode analysis as part of the approval process.

> 120.140(A) Basics of Calculations. Where a power control system (PCS) is employed and is continuously in operation to prevent overloading of the conductors and equipment, the calculated load shall be permitted to be based on the maximum load that the PCS will allow on that circuit, subject to the provisions of Article 130.

Article 130 — Energy Management Systems (formerly Article 750)

Article 750 (Energy Management Systems) was relocated to new Article 130 in Chapter 1, elevated alongside Articles 110 (General Installation Requirements) and 120 (Load Calculations) as a foundational Chapter 1 article. The 2026 edition restructured the article into two parts and added new provisions for Power Control Systems (PCS). This elevation reflects the reality that energy management is no longer a specialty system — it is fundamental infrastructure in commercial, industrial, and increasingly residential buildings.

Relocation – Article 130 (formerly Article 750)

Energy Management Systems Elevated to Chapter 1

> ***Change at a Glance:*** *Article 750 relocated to new Article 130 in Chapter 1; restructured into two parts with new PCS provisions.*

❖ **What Changed:** The entire content of Article 750 (Energy Management Systems) was relocated to new Article 130 in Chapter 1. The article was restructured into two parts: Part I covering general EMS requirements (Section 130.50 General, Section 130.60 Conductors and Equipment, Section 130.70 Settings) and a new Part II covering Power Control Systems (PCS). The PCS terminology replaces the older EMS references in load-limiting contexts throughout the code. Part I applies to all EMS installations; Part II applies specifically to PCS installations used for overload protection of conductors and equipment.

❖ **Its Effect:** Placing EMS requirements in Chapter 1 reflects the reality that energy management is now mainstream electrical infrastructure. An EMS or PCS in a modern commercial building coordinates generators, battery storage, EV charging stations, HVAC systems, and utility interaction as a unified system. Their elevation to Chapter 1 ensures that engineers, inspectors, and installers approach EMS as a foundational system requirement rather than a supplementary specialty system. The distinction between Part I (general EMS) and Part II (PCS) ensures that the specific, stringent requirements for PCS-based load management are clearly identifiable and consistently applied.

Revision – 130.50

EMS General Requirements — Monitoring and Automatic Load Control

> ***Change at a Glance:*** *EMS must continuously monitor current levels and automatically adjust loads to prevent overloading.*

❖ **What Changed:** Section 130.50 establishes the core operational requirements for an EMS. An EMS must monitor conductor and equipment current levels and automatically adjust loads to prevent overloading. This is real-time, continuous protection — the EMS watches actual current levels and responds automatically, not just on a scheduled basis. The monitoring must cover all conductors and equipment that the EMS is responsible for protecting from overload. The automatic adjustment must be capable of reducing loads to prevent overloading before conductor ampacity limits are exceeded.

❖ **Its Effect:** The monitoring and automatic adjustment requirements are the operational foundation that distinguish a qualified EMS from a simple timer or scheduled control system. A system that merely schedules loads on a time basis without monitoring actual current does not meet the requirements of Article 130 and cannot qualify for the conductor sizing and load calculation provisions of Articles 120 and 130. The requirement for real-time current monitoring ensures that the EMS responds to actual electrical conditions rather than predicted schedules — critical in environments where load patterns vary significantly from predictions.

New – 130.60

Conductors and Equipment — EMS Sizing Provisions

> ***Change at a Glance:*** *New 130.60 establishes conductor and equipment sizing requirements for EMS-controlled installations.*

❖ **What Changed:** New Section 130.60 establishes that conductors and equipment controlled by an EMS may be sized based on the EMS-controlled maximum load rather than the full nameplate rating, subject to specific conditions. Section 130.60(A) sets the general requirement that any PCS used for overload

prevention must be listed specifically for PCS functionality. Section 130.60(B) addresses marking requirements: equipment and conductors protected by a PCS must be marked to indicate that the PCS is in use and performing overload control on the downstream system. The marking must be durable, legible, and field-visible.

❖ **Its Effect:** The marking requirement in Section 130.60(B) is practically important. When maintenance personnel, future contractors, or inspectors encounter conductors that appear undersized for the equipment they supply, the PCS marking explains why — the conductors are sized for the PCS-controlled maximum load, not the nameplate load. Without this marking, personnel might incorrectly conclude that the installation is a code violation and attempt to 'correct' it by removing or bypassing the PCS. The marking requirement also ensures that any future modifications to the installation account for the PCS-based sizing when evaluating the impact of load additions or changes.

New – 130.70

PCS Settings — Documentation, Accessibility, and Field Marking

> ***Change at a Glance:*** *PCS settings must be documented, accessible to AHJ, and field-marked on the EMS equipment.*

❖ **What Changed:** New Section 130.70 establishes documentation and accessibility requirements for PCS control settings. Section 130.70(A) requires that each PCS must include defined control settings in amperes for any conductor, source, or load it regulates. These settings dictate the operating thresholds for current flow — the point at which the PCS takes action to limit or shed load. Settings must be documented and accessible to the AHJ without requiring special tools or access codes. Section 130.70(B) addresses adjustable settings: when settings are adjustable, the accessible range of adjustment must be documented, and the maximum allowable setting must not exceed the ampacity of the protected conductor.

❖ **Its Effect:** The documentation and AHJ accessibility requirements are essential for code enforcement. The load calculation and conductor sizing benefits of a PCS are only valid when the PCS is properly configured and operating within its

design parameters. An AHJ must be able to verify that the PCS is set correctly — that the current limits are actually at or below the conductor ampacity being protected. Without this ability, an inspector cannot confirm that the PCS provides the overload protection that justifies the reduced conductor sizing under Section 120.140(A). The maximum adjustable setting limitation prevents the PCS from being reconfigured to allow currents exceeding conductor ampacity after inspection.

New – 130.70(C) and 130.70(D)

PCS Field Marking and Multiple Sources

> ***Change at a Glance:*** *PCS-controlled equipment must be field-marked; multiple source systems addressed.*

❖ **What Changed:** Section 130.70(C) requires that equipment and distribution systems using a PCS for overload protection must be field-marked to indicate that load protection is being handled by an external PCS. The marking must be durable and visible to allow personnel to quickly recognize that PCS-based demand limitation is active. Section 130.70(D) addresses installations with multiple power sources — where a PCS manages loads supplied by more than one source (for example, a service plus on-site generation). The PCS must account for the maximum current from all sources simultaneously.

❖ **Its Effect:** The multiple source provision in 130.70(D) is increasingly relevant as buildings combine utility service with on-site solar generation, battery storage, and backup generators. A PCS that manages EV charging loads based only on utility current without accounting for on-site generation may allow total current to exceed conductor ampacity when generation is active. The 130.70(D) requirement ensures that PCS systems in multi-source installations account for all current contributions to the protected conductors.

New – Article 130, Part II

Power Control Systems — New Part II of Article 130

> ***Change at a Glance:*** *Part II establishes listing, operational, documentation, and marking requirements specific to PCS.*

❖ **What Changed:** Part II of Article 130 establishes specific requirements for Power Control Systems (PCS), which are a distinct subset of EMS focused on preventing conductor and equipment overloads through active current management. The PCS must be a listed device — listed specifically for its intended PCS function, including current monitoring accuracy, response time, control outputs, fault tolerance, and communication with monitored systems. The listing verifies that the PCS meets minimum safety, operational, and reliability thresholds under conditions of overload, failure, and normal operation.

❖ **Its Effect:** The PCS provisions create the formal framework for load-limiting technology that has been deployed in EV charging infrastructure for several years. The listing requirement is the most significant aspect — it ensures that only verified, tested systems can claim the load calculation and conductor sizing benefits of Section 120.140(A). A custom-built or non-listed control system cannot qualify as a PCS regardless of its described capabilities. The listing requirement creates a verifiable, consistent standard that AHJs can enforce and designers can rely on as a stable, tested system. Part II also coordinates with Article 120 Part IX, which addresses the load calculation methodology when a PCS is employed.

Note: PCS listings are evaluated by recognized testing laboratories against performance standards that assess current monitoring accuracy, response time, control reliability, and fail-safe behavior. When evaluating a PCS for code compliance, installers and inspectors should verify that the listing specifically covers PCS functionality, not just the hardware components.

Quiz Questions

1. **In the 2026 NEC, what does the revised Section 90.3 state about Chapter 8?**
   a) Chapter 8 remains fully independent from all other chapters
   b) Chapters 5 through 7 may now supplement or modify requirements in Chapters 1 through 8
   c) Chapter 8 applies only to residential communications installations
   d) Chapter 8 was deleted and its content moved to Chapter 7

2. **Section 90.2 was revised in 2026 to explicitly include which of the following within the scope of the NEC?**
   a) Solar photovoltaic systems on commercial rooftops
   b) Underground utility distribution conductors
   c) Export of electric power from electric vehicles (bidirectional charging)
   d) Portable generator systems used for temporary construction power

3. **Under new Section 110.3(C), when a manufacturer's installation instructions conflict with NEC requirements, what governs?**
   a) The manufacturer's instructions always take precedence since the equipment is listed
   b) The NEC takes precedence; manufacturer instructions must not conflict with NEC requirements
   c) The AHJ determines which applies on a case-by-case basis at the inspection
   d) The more restrictive of the two requirements automatically applies

4. **Article 220 (Load Calculations) was relocated in the 2026 NEC. Where was it moved?**
   a) New Article 115 in Chapter 1
   b) New Article 120 in Chapter 1
   c) New Article 125 in Chapter 1
   d) New Article 130 in Chapter 1

5. **Article 750 (Energy Management Systems) was relocated in the 2026 NEC. Where was it moved?**
   a) New Article 120 in Chapter 1
   b) New Article 125 in Chapter 1
   c) New Article 130 in Chapter 1
   d) New Article 135 in Chapter 1

6. **Which of the following correctly describes the new parallel Section XXX.3 added throughout the 2026 NEC?**
   a) Listing requirements — equipment must be listed for its application
   b) Reconditioned equipment provisions
   c) Scope of the article
   d) Uses permitted

7. **Which of the following equipment types is explicitly PROHIBITED from reconditioning under the 2026 NEC?**
   a) Switchboards
   b) Motor control centers
   c) GFCIs and AFCIs
   d) Transformers

8. **The new formal definition of OCPD (Overcurrent Protective Device) in Article 100 specifically EXCLUDES which of the following?**
   a) Molded-case circuit breakers
   b) Supplemental overcurrent protective devices
   c) Cartridge fuses
   d) Solid-state circuit breakers

9. **What were the two new voltage terms formally defined in Article 100 in the 2026 NEC that describe voltage relationships in both AC and DC systems?**
   a) Phase-to-Neutral and Phase-to-Ground
   b) Line-to-Neutral and Line-to-Ground
   c) Hot-to-Neutral and Hot-to-Ground
   d) Voltage-to-Neutral and Voltage-to-Ground

10. **The 2026 NEC added Cable Tie types 2S and 21S to the formal definitions. What additional capability do Types 2S and 21S have compared to Types 1, 11, 2, and 21?**
    a) They are rated for outdoor use in sunlight
    b) They are additionally evaluated for the support and securing of cable, flexible conduit, and flexible tubing
    c) They are listed for use in hazardous locations
    d) They have higher temperature ratings for use in plenums

11. **What was added to the arc-flash hazard warning requirements under the revised Section 110.16?**
    a) Meter socket enclosures were removed from the list
    b) Splices accessible to qualified persons were added to the list
    c) The voltage threshold for labeling was raised to 600V
    d) Arc-flash labels are now required only on equipment over 1000V

12. **Under the 2026 revision to Section 110.26, when must the required clear working space be maintained?**
    a) Only when equipment doors are in the closed position
    b) When equipment doors are open or can be opened to 90 degrees
    c) Only during the initial AHJ inspection of the installation
    d) When the panel is energized at or above full load current

13. **New Section 120.5(D) in the 2026 NEC formally addresses which type of loads in load calculation methodology?**
    a) Emergency and legally required standby loads
    b) Motor-driven equipment loads with variable speed
    c) Direct-current (DC) loads
    d) Continuous loads operating for 3 hours or more

14. **New Section 120.5(E) clarifies the application of what multiplier in load calculations?**
    a) The 80% derating factor for conductors in conduit
    b) The 125% multiplier for continuous loads
    c) The 100% demand factor for EVSE circuits
    d) The 125% motor FLA conductor sizing factor

15. **Under new Section 120.140(A), when a listed Power Control System (PCS) is installed and continuously operating, conductors and OCPDs may be sized based on what?**
    a) The largest single connected load on the circuit
    b) The sum of all connected nameplate loads
    c) The maximum load the PCS will allow on that circuit
    d) 125% of the calculated demand load

16. **New Table 120.83 in the 2026 NEC provides demand factors for which type of load in single-family dwelling calculations?**
    a) Electric clothes dryers
    b) Air conditioning and heat pump equipment
    c) Electric vehicle (EV) charging loads
    d) General lighting based on square footage

17. **The 2026 NEC revised Section 120.41 to change the dwelling unit general lighting load from 3 VA per square foot to what value?**
    a) 1.5 VA per square foot
    b) 2 VA per square foot
    c) 2.5 VA per square foot
    d) The value remained at 3 VA per square foot

18. **Under Article 130 Section 130.50, what must an Energy Management System (EMS) continuously do?**
    a) Record energy usage data for submission to the utility company
    b) Monitor conductor and equipment current levels and automatically adjust loads to prevent overloading
    c) Communicate with the utility for demand response curtailment programs
    d) Control only EV charging equipment loads in the building

19. **The deleted Article 235 was replaced by five new standalone articles for systems over 1000V. Which of the following is NOT one of those new articles?**
    a) Article 265 — Branch Circuits Over 1000V
    b) Article 266 — Feeders Over 1000V
    c) Article 270 — Grounding and Bonding Over 1000V
    d) Article 255 — Overcurrent Protection Over 1000V

20. **Under new Article 130 Part II, what must a Power Control System (PCS) be in order to qualify for the conductor sizing provisions of Section 120.140(A)?**
    a) Approved by the AHJ on a case-by-case basis
    b) A listed device specifically evaluated for PCS functionality
    c) Manufactured by a recognized national brand
    d) Installed with a separate monitoring system