

ARTICLE 90

Introduction to the ***NATIONAL ELECTRICAL CODE***

INTRODUCTION TO ARTICLE 90—INTRODUCTION TO THE *NATIONAL ELECTRICAL CODE*

Many *NEC* violations and misunderstandings wouldn't occur if people doing the work simply understood Article 90. For example, many people see *Code* requirements as performance standards. In fact, the *NEC* requirements are bare minimums for safety. This is exactly the stance electrical inspectors, insurance companies, and courts take when making a decision regarding electrical design or installation.

Article 90 opens by saying the *NEC* isn't intended as a design specification or instruction manual. The *National Electrical Code* has one purpose only, and that's the "practical safeguarding of persons and property from hazards arising from the use of electricity." It goes on to indicate that the *Code* isn't intended as a design specification or instruction manual. The necessity to carefully study the *NEC* rules can't be overemphasized, and the role of textbooks such as this one is to help in that undertaking. Understanding where to find the rules in the *Code* that apply to the installation is invaluable. Rules in several different articles often apply to even a simple installation.

Article 90 then describes the scope and arrangement of the *NEC*. A person who says, "I can't find anything in the *Code*," is really saying, "I never took the time to review Article 90." The balance of Article 90 provides the reader with information essential to understanding those items you do find in the *NEC*.

Typically, electrical work requires you to understand the first four chapters of the *Code* which apply generally, plus have a working knowledge of the Chapter 9 tables. That knowledge begins with Article 90. Chapters 5, 6, and 7 make up a large portion of the *NEC*, but they apply to special occupancies, special equipment, or other special conditions. They build on, modify, or amend the rules in the first four chapters. Chapter 8 contains the requirements for communications systems, such as telephone systems, antenna wiring, CATV, and network-powered broadband systems. Communications systems aren't subject to the general requirements of Chapters 1 through 4, or the special requirements of Chapters 5 through 7, unless there's a specific reference in Chapter 8 to a rule in Chapters 1 through 7.

90.2(B)(5) Not Within the Scope of the *NEC*

The areas in which utility installations aren't covered has been revised to address federal lands, Native American reservations, state agencies, military bases, and similar locations.

90.2 Scope of the *NEC*.

(B) What Isn't Covered. The *NEC* doesn't apply to:

(5) **Electric Utilities.** The *NEC* doesn't apply to installations under the exclusive control of an electric utility where such installations:

- a. Consist of service drops or service laterals and associated metering. **Figure 90-1**

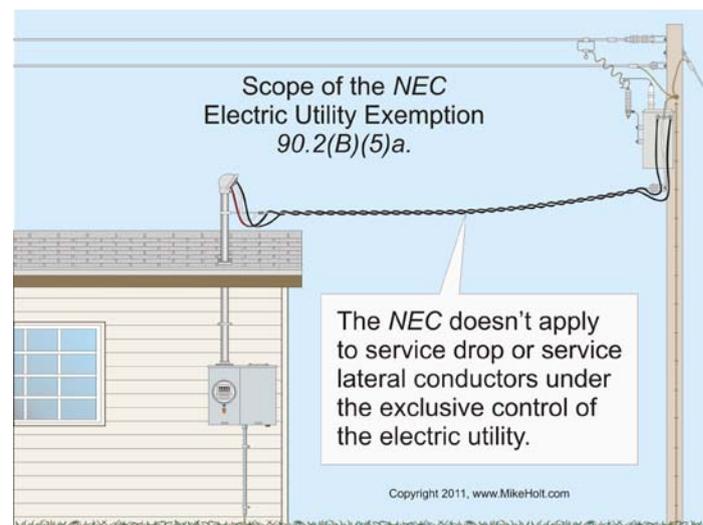


Figure 90-1

- b. Are on property owned or leased by the electric utility for the purpose of generation, transformation, transmission, distribution, or metering of electric energy. **Figure 90–2**

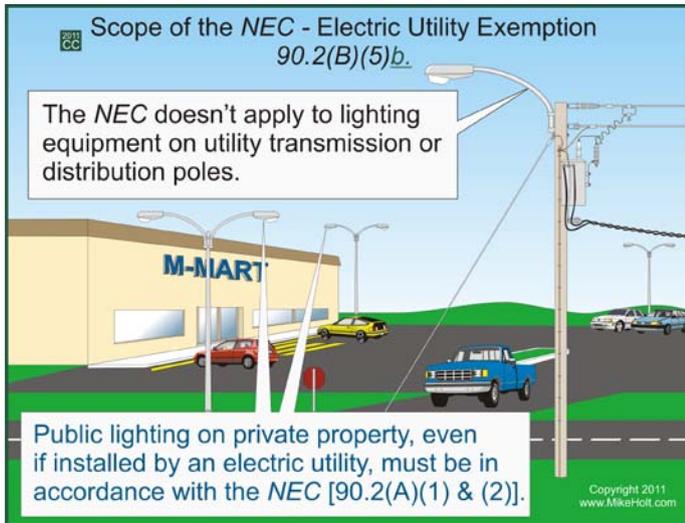


Figure 90–2

Author's Comment: Luminaires located in legally established easements, or rights-of-way, such as at poles supporting transmission or distribution lines, are exempt from the *NEC*. However, if the electric utility provides site and public lighting on private property, then the installation must comply with the *Code* [90.2(A)(4)]. See **Figure 90–2**

- c. Are located on legally established easements, or rights-of-way. **Figure 90–3**
- d. Are located by other written agreements either designated by or recognized by public service commissions, utility commissions, or other regulatory agencies having jurisdiction for such installations; limited to installations for the purpose of communications, metering, generation, control, transformation, transmission, or distribution of electric energy where legally established easements or rights-of-way can't be obtained. These installations are limited to federal lands, Native American reservations through the U.S. Department of the Interior Bureau of Indian Affairs, military bases, lands controlled by port authorities and state agencies and departments, and lands owned by railroads.

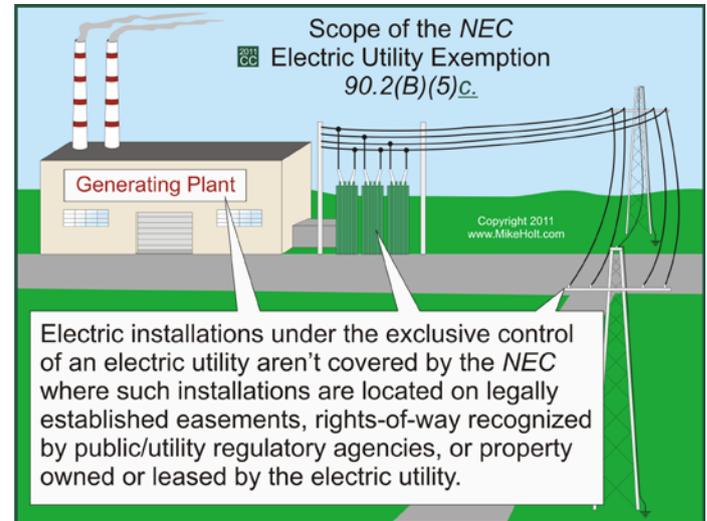


Figure 90–3

Note to 90.2(B)(4) and (5): Utilities include entities that install, operate, and maintain communications systems (telephone, CATV, Internet, satellite, or data services) or electric supply (generation, transmission, or distribution systems) and are designated or recognized by governmental law or regulation by public service/utility commissions. Utilities may be subject to compliance with codes and standards covering their regulated activities as adopted under governmental law or regulation.

ANALYSIS: A change was made in the 2008 edition of the *NEC* that eliminated “other agreements” from the list of ways that utilities could be exempted from *Code* compliance. An unintended result of this change was the removal of installations on Native American reservations, federal lands, and similar areas from *NEC* exemption. This change now gives the AHJ a means to exempt utility wiring in these areas.

90.5(C) and (D) Mandatory Requirements and Explanatory Material

The term “Fine Print Note” has been changed to “Informational Note.” Also, the term “Annex” is now “Informative Annex.”

90.5 Mandatory Requirements and Explanatory Material.

(C) Explanatory Material. References to other standards or sections of the *NEC*, or information related to a *Code* rule, are included in the form of **Informational Notes**. Such notes are for information only and aren't enforceable as a requirement of the *NEC*.

For example, Informational Note 4 in 210.19(A)(1) recommends that the voltage drop of a circuit not exceed 3 percent. This isn't a requirement; it's just a recommendation.

Author's Comment: For convenience and ease of reading, in this textbook, I will identify Informational Note simply as “Note,” except when that phrase is used in the change summary (gray background) or analysis (yellow background).

(D) Informative Annexes. Nonmandatory information annexes contained in the back of the *Code* book are for information only and aren't enforceable as a requirement of the *NEC*.

ANALYSIS: The term “fine print” doesn't describe the function of a sentence or provision, it simply refers to the size of the text. By changing the term to “Informational Note,” the *Code* makes it quite clear that these notes are intended to provide information and nothing else. The same logic applies to the change to “Informative Annexes.” The style and layout of these notes and annexes haven't changed, nor has the intent.