

2024 Updates to NFPA 70E®, *Standard for Electrical Safety in the Workplace*®

The National Fire Protection Association (NFPA) 70E, [*Standard for Electrical Safety in the Workplace*](#), is a national consensus standard developed to help you avoid workplace injuries and fatalities due to electrical hazards. This document provides an overview of several key revisions to NFPA 70E in 2024. Use this information to update your electrical safety program and practices.



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REVISED TERMINOLOGY

NFPA 70E 2024 revised terminology to promote understanding and applicability of the standard.

Shock: The use of “shock” was used in previous editions throughout the standard. “Shock” is now read as “electric shock” throughout most of the standard – meaning the dangerous effects of electrical current on the body. The standalone term “shock” in the standard now means “shock wave,” like from an explosion.

Protectors: These are gloves and mittens worn over rubber-insulating gloves. Previous versions called for “leather protectors,” but “leather” has been removed so new, more effective materials can be used.

Ionizing Radiation: The definition was updated to read, “radiation consisting of particles, X-rays, or gamma rays with sufficient energy to cause ionization of atoms or molecules through which it passes.”

Non-Ionizing Radiation: The definition was updated to read, “static electric and magnetic (0 to 1Hz), sub radiofrequency (1Hz to 3Hz), radiofrequency (3Hz to 300GHz) fields, and infrared, visible light, and near ultraviolet (near UV) that cannot ionize an atom or molecule.

SCOPE

Each article now starts with a brief statement that provides a clear overview of the content within that article. The addition of scope statements **helps you find necessary safety information** within the standard.

For example:

- Article 205 has a scope that indicates you can find general maintenance requirements for electrical equipment.
- Article 130 says it covers requirements for work involving electrical hazards such as the electrical safety-related work practices, assessment, precautions, and procedures when an electrically safe work condition (ESWC) cannot be established.



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ELECTRICAL SAFETY-RELATED WORK PRACTICES

Article 110 covers general requirements for electrical safety-related work practices. It indicates the need to establish, document, and implement an ESWC policy. The written policy must include **hazard elimination** as the **first priority** when implementing safety-related work practices. The article indicates that this policy can be documented in a written electrical safety program, in the overall safety and occupational health management system, or in similar documentation – it must be in writing.

ELECTRICALLY SAFE WORK CONDITIONS

Article 120 also includes information on establishing an ESWC. It provides information on achieving an ESWC with a lockout/tagout program (as you must have an established, documents, and implemented plan to achieve an ESWC). You must now check the current/voltage at **each** work point versus a single point to establish an ESWC.

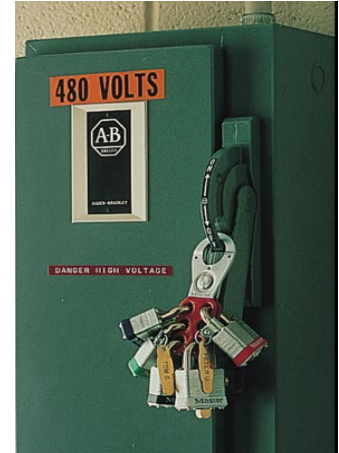


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JOB SAFETY PLANNING

The recent update requires an emergency response plan as part of job safety planning. A **written emergency response plan** ensures the safety of workers in the event of an electrical incident. A qualified person, or one that demonstrates skills and knowledge related to the construction and operation of electrical equipment, must prepare an emergency response plan.

Emergency response plans must be specific to electrical incidents and the steps taken during an electrical shock or an arc flash incident. It needs to document the job task and individual tasks, associated electrical hazards, results of the electrical shock risk assessment and arc flash risk assessment, work procedures, special precautions, and energy source controls.

ARC FLASH RISK ASSESSMENTS

There is a new note emphasizing that a closed cover or door may not contain all the energy released during any arc flash incident as the state of equipment can change rapidly and/or a closed cover or door may not provide sufficient safety. Consider this note during **all** arc flash risk assessments and not just those involved with direct current (DC) equipment. This can influence additional risk reduction methods, controls, and personal protective equipment (PPE) needed when operating electrical equipment with secured covers and doors.

ELECTRIC SHOCK PROTECTION BOUNDARIES

A new note regarding elevation was made for restricted approach boundaries. The published boundaries are based on elevations **less than** 3,000 feet above sea level and adjustments should occur for higher elevations.

For additional information on the SMCX's services, please visit the SMCX-hosted website at: <https://www.smcx.org/>.