FACT SHEET

ELECTRICAL SAFETY IN THE WORKPLACE

The risks of electric shock, electrocution, arc flash, and arc blast are a significant health and safety concern in the workplace. Many electrical incidents could have been prevented through compliance with the latest safety codes and standards. NFPA *70E*®, *Standard for Electrical Safety in the Workplace*®, is a critical document to help provide a working area for employees that is safe from unacceptable risk associated with the use of electricity in the workplace.

With the release of the current edition for 2024, NFPA *70E* clearly establishes safety processes that use policies, procedures, and program controls to reduce these risks to an acceptable level. The core objective is practical and achievable electrical safety that helps ensure the employee goes home safe at the end of the day.

The risk controls discussed in this standard are intended to be sound, viable, workable applications of safety procedures and policies to be implemented by both the employer and employee. The requirements at the heart of NFPA *70E* are suitable for use and implementation by agencies and employers charged with the responsibility of electrical safety program development, implementation, and maintenance.

How NFPA *70E* Works with Other Codes and Standards

Following and fostering basic installation safety, maintenance, and prudent work procedure rules is essential to employee safety. This can be accomplished by taking the following actions:

- Installing the electrical system in accordance with *NFPA 70®, National Electrical Code® (NEC®)*;
- Maintaining the electrical system in accordance with NFPA 70B, *Standard for Electrical Equipment Maintenance* (in the absence of the specific manufacturer's instructions); and
- Following the safety policies, procedures, and process controls identified in NFPA 70E.

When these three key documents are used in concert, and correctly, they help provide for a complete electrical cycle of safety. When one or more pieces are missing, it can leave the door open to catastrophic accidents. Whether you are the contracted electrician doing the initial installation, a business owner implementing an electrical safety program to keep your employees safe, or the plant electrician maintaining equipment, your role is critical for the continued safety of all personnel.

FAQs

What is the relationship between OSHA standards and NFPA *70E*?

NFPA *70E* is an internationally accepted American National Standard that defines electrical safety-related work practices. The U.S. Department of Labor's Occupational Safety and Health Administration (OSHA) looks to the prescriptive-based requirements of NFPA *70E* to fulfill the performance-based requirements included in its standards. NFPA *70E* fleshes out how the performance-based requirements in the OSHA standards can be met by providing and defining minimum standard industry practices necessary for electrical safety. OSHA is the law, and NFPA *70E* outlines ways to comply with OSHA's electrical safety requirements. This symbiotic relationship between NFPA *70E* and OSHA electrical safety standards helps to increase safety in the workplace.

Can NFPA *70E* be used worldwide?

NFPA *70E* is an internationally applied standard. The electrical safety-related work practices, safety-related maintenance requirements, and other administrative controls in NFPA *70E* apply to all alternating and direct current systems. The requirements

ELECTRICAL SAFETY IN THE WORKPLACE *CONTINUED*

in NFPA *70E* apply to all types of employees, employers, and facilities, including in-house employees, contract employees, contractor employees, general industrial workplaces, and construction workplaces regardless of their location in the world.

Some Major Changes for NFPA *70E* 2024 Edition

- **Article 100:** Definitions previously in Chapter 3 have been relocated, with some being revised and consolidated, into Article 100.
- **Article 110:** Article 110 saw some changes around 110.2(B) moving normal operation into Exception No. 1 and changing 110.2(C) to consider conductors not in an electrically safe work condition (ESWC) until all applicable requirements in Article 120 have been established. It also clarified that a "qualified person" needs to be qualified for certain equipment and tasks to be performed. Amended 110.2(A) requires that an employer establish, document, and implement an ESWC policy.
- **Article 130:** The title of Section 130.1 was changed to correlate with the addition of "Scope" sections to each article. In 130.4, the term *electric* was added to *shock risk assessment* to differentiate it from a shock wave hazard. Throughout Article 130, the term *leather protectors* was changed to *protectors* to allow for other options.
- **Section 130.12:** Revisions have been made to include any work not within sight from the point of work to take additional steps to verify absence of voltage.
- **Section 220.1:** This was revised to include a requirement for maintenance.
- **Article 320:** Revisions were made to add watt level for short-circuit power to address heating concerns. Section 320.3(A)(1) had 40 milliamperes added to the dc threshold to be consistent with other Chapter 3 articles and added a threshold for exposure to a thermal hazard. Section 320.3(A)(2) was revised to add "thermal" to the list of hazards associated with batteries and battery rooms.
- **Article 360:** Revisions were made to 360.5(B)(6) to include ground sticks as an approved method to test for absence of voltage of capacitors. Also, the term *grounding* in Section 360.6 was changed to *ground* to be consistent with the definition of *ground stick*.

How does NFPA *70E* address the roles of both the employer and the employee regarding electrical safety?

Electrical safety is a shared responsibility between employers and employees. Compliance with safety regulations is not just an employer responsibility—the electrical safety of employees requires a collaborative effort between workers and management. Employers are required to have an electrical safety program (ESP) for employees to follow.

In turn, the employees are required to put into practice the policies and procedures of the ESP, which includes the training to perform their tasks safely and the use of required tools and safety equipment. NFPA *70E* is not just about the actions an employer took before an incident's investigation—it is about preventing the worker from being injured. Regardless of the employer's ESP, it is the employee who can have the biggest impact on his or her own electrical safety.

Learn More

- **nfpa.org/70E**
  Access the full text of the standard, submit technical questions to NFPA staff, sign up to receive email alerts, view the latest news and research, check on the status of the next edition, and more.
- **nfpa.org/facesoffire**
  Read stories of people impacted by electrical incidents and learn about the need for continued education and awareness about electrical hazards on the job and at home.
- **nfpa.org/electricalsolutions**
  Explore information on electrical safety in the workplace and the suite of products available, including publications, online training, and certifications.
- **nfpa.org/LiNK**
  Sign up for a free trial of NFPA LiNK® to access the new information delivery platform for NFPA codes and standards.

This material contains some basic information of NFPA *70E*®, *Standard for Electrical Safety in the Workplace*®. It identifies some of the requirements in NFPA *70E* as of the date of publication. This material is not the official position of any NFPA technical committee on any referenced topic which is represented solely by the NFPA documents on such topic in their entirety. For free access to the complete and most current version of all NFPA documents, please go to nfpa.org/docinfo. The NFPA makes no warranty or guaranty of the completeness of the information in this material and disclaims liability for personal injury, property, and other damages of any nature whatsoever, from the use of or reliance on this information. In using this information, you should rely on your independent judgment and, when appropriate, consult a competent professional.

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