

NFPA 70E
What Does It Mean To You?
What Does OSHA Expect From Me?
What Can You Do?

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Historically, the National Electrical Code (NEC) and other safety codes have been primarily concerned with protection from fire, electrocution, and shock hazard—arc flash hazards were not specifically addressed. This is now changing; the 2002 NEC contains requirements for warning labels, and the National Fire Protection Association (NFPA) 70E–2004 and Institute of Electrical and Electronics Engineers (IEEE) 1584–2002 provide guidance on implementing appropriate safety procedures for arc flash hazards.

The ruling is straightforward. Companies are required to make arc flash hazards an integral part of an ongoing documented safety program. The official ruling from the Department of Labor states:

“Though OSHA does not, per se, enforce the NFPA 70E standard, OSHA considers the NFPA Standard a recognized industry practice. The employer is required to conduct hazard assessment in accordance with 29 CFR 1910.132 (d)(1), and 1926.28(a).” The employer is responsible to:

1. Assess the hazards in the work place
2. Select, have, and use the correct personal protective equipment (PPE)
3. Document the assessment
4. Train their staff on the hazards

“If an arc flash hazard is present, or likely to be present, then the employer must select and require employees to use the protective apparel. Employers who conduct the hazard/risk assessment, and select and require their employees to use protective clothing and other PPE appropriate for the task, as stated in the NFPA 70E standard, are deemed in compliance with the Hazard Assessment and Equipment Selection OSHA Standard.”

In short: Follow NFPA 70E to be in compliance. But even more importantly, follow the NFPA 70E to protect employees. Don't confuse what is needed with what is required.

What Does OSHA Expect From Me?

OSHA expects quite a bit, actually. Safety is not to be a passive, reactive policy that is brought out after-the-fact or for show-and-tell. Reviewing some of the major requirements:

- Employers must know what their employees do. Understand that 1910.296 only applies to power generation, transmission, and distribution installations and related equipment. Supplementary electric generating equipment (emergency, standby, or similar purposes) is only covered in Subpart S. OSHA 20 CFR 1910.269(a)(2)(iii) states: “The employer shall determine, through regular supervision and through inspections conducted on at least an annual basis, that each employee is complying with the safety-related work practices required by this section.” OSHA would consider that tasks that are performed less often than once a year to necessitate retraining before the performance of the work practices involved.
- Employees must be trained in their job tasks. OSHA 29 CFR 1910.332 states: “The training requirements contained in this section apply to employees who face a risk of electrical shock that is not reduced to a safe level by the electrical installation requirements.”
- OSHA 29 CFR 1910.301 through .308 basically paraphrases the National Electrical Code (NEC).
- Selection and Use of Work Practices: OSHA 29 CFR 1910.333(a) General. Safety-related work practices shall be employed to prevent electric shock or other injuries resulting from either direct or indirect electrical contacts, when work is performed near or on equipment or circuits which are or may be energized. The specific safety-related work practices shall be consistent with the nature and extent of the associated electrical hazards.

(1) Deenergized parts. Live parts to which an employee may be exposed shall be deenergized before the employee works on or near them, unless the employer can demonstrate that deenergizing introduces additional or increased hazards or is infeasible due to equipment design or operational limitations. Live parts that operate less than 50 volts to ground need not be deenergized if there will be no increased exposure to electrical burns or to explosions due to electric arcs.

Note 1: Examples of increased or additional hazards include interruption of life support equipment, deactivation of emergency alarm systems, shutdown of hazardous location ventilation equipment, or removal of illumination for an area.

Note 2: Examples of work that may be performed on or near energized circuit parts because of infeasibility due to equipment design or operational limitations include testing or electric circuits that can only be performed with the circuit energized, and work on circuits that form an integral part of a continuous industrial process in a chemical plant that would otherwise need to be completely shut down in order to permit work on one circuit or piece of equipment.

Note 3: Work on or near deenergized parts is covered by paragraph (b) of this section.

- In addition, review and consideration of 1926.416(a) {3/K} is a must.

So where should you focus your attention? It seems logical that safe work practices should be the focus, and you should ensure that you have qualified personnel who understand the hazards involved with the specific tasks they are required to do for their jobs.

One of the best features of 70E is the tables, specifically Table 130.7. This will assist you in choosing what PPE is required for standard tasks that electrical workers perform.

What Can You Do?

Get up to speed on the regulations and the NFPA Standard 70E.

The real reason we should apply the OSHA regulations and NFPA 70E is because no one wants to see another person injured or killed. If we make decisions based on a lack of knowledge, it can have a negative consequence on our employees' lives and on our future.

For a copy of the NFPA 70E Standard, visit www.nfpa.org. For copies of the U.S. Department of Labor Occupational Safety & Health Administration Standard Interpretations, visit www.osha.gov.

Standard Interpretations: 10/18/2006 – Incorporation of NFPA 70E-2000 into OSHA Standards, and 07/25/2003 – General Duty Clause (5(a)(1) citations on multi-employer worksites; NFPA 70E electrical safety requirements and personal protective equipment.