NFPA 70E Employer Responsibilities—What You Need to Know

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1 Continuing Education Hour
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• How many times has your company been asked by an owner or customer to work on equipment energized?

• How many times has an electrician choose to not turn a circuit off because it was an inconvenience?

• How many times as a company said yes we can work it hot since our competition won’t do it?
• Does pride cause an electrician to take unnecessary risks?
• Does production outweigh safety in getting the job done?
• Who is going to get the blame if and when something goes wrong?
  • Owner?
  • Contractor?
  • Electrician?

• Does OSHA regulations and NFPA requirements only pertain to Electrical Contractors and Electricians?
• They apply to anyone performing electrical work.
  • Electricians
  • HVAC Technicians
  • Maintenance Workers
  • Control Personnel
Is there any electrical contractor, HVAC contractor, plant maintenance worker or plant owner that may not know about NFPA 70E® in todays workplace?

- Should they?

Can they plead ignorance as a defense against any citation?

What kind of Personal Protective Equipment should an electrician or electrical worker be familiar with in order to work safely on energized circuits?

Objectives

- Explain why an employer should take responsibility for following the requirements set forth in NFPA 70E
- List three elements of management oversight for NFPA 70E compliance
- Identify the information which should be shared between host and contractor
- Determine who should sign off on an Energized Electrical Work Permit
- Name three audits that must be performed and their frequency
Overview

Rules Governing Electrical Installation and Safety

- National Electrical Code (NEC)
- OSHA
- NFPA 70E

Overview

NFPA 70E Compliance

- Consensus standard
- OSHA General Duty 5(a)(1)
- 1910.335(a)(1)(i)
Overview

Management Oversight and NFPA 70E Requirements:
- Establish a policy
- Coordinate efforts with host employers
- Develop a written electrical safety program
- Training including First Aid, CPR and AED
- Personal protective equipment/clothing
- Maintenance program
- Special Equipment
- Audit Program

NFPA 70E Policy

- Express commitment for compliance with NFPA 70E
- Make Employees and Prospective Clients/Customers aware of your commitment
Host Employer/Customer/Owner

**Pre-bid**
- (Estimator, Designer, Owner, etc.)
- Determine whether work can be performed de-energized
- Provide info to GC/Host/Owner why work must be performed de-energized

**Pre-job Meeting**
- (Project Manager, Site General Foreman, Foreman, Owner, etc.)
- Advise host of any unique hazards
- Ensure host provides info on known hazards that are existing
- Document the meeting
Host Employer/Customer/Owner

During Work

 Furniture Manager, Site Foreman, Workers, and/or Owner

 Report any unanticipated hazards found

 Identify who to notify if violations are observed

 Report actions taken to prevent future violations

Written Electrical Safety Program

Electrical Safety Program

 Purpose/Scope

 Awareness and Self-Discipline

 Principles

 Controls

 Procedures

 Hazard Identification and Risk Assessment Procedures

 Job Briefing Procedures
Written Electrical Safety Program

Energized Work Permit
- Description of circuit/equipment and location
- Justification for working energized
- Safe work practices to be used
- Shock and Arc Flash Risk Assessments
- Procedures to keep unqualified persons out of work area
- Documentation of job briefing
- Authorization for working energized

Written Electrical Safety Program

LOTO
- Purpose
- Training and Responsibilities
- Preparation for Lockout (Tagout)
- Lockout (Tagout) Steps
- Removal of LOTO
- Special Procedures
- Discipline
- Equipment
- Audit
Training

Ensure training
- Classroom
- On-the-job
- Combination of both
- First Aid, CPR and AED
- Annually trained

Demonstrates proficiency
Qualified vs unqualified

Training

Qualified
- Special precautionary techniques; PPE; insulating/shielding materials; insulated tools and test equipment
- First aid and emergency procedures
- Skills to determine voltage
- Approach distances
- Selection, use and limitations of voltage detector
- How to determine hazards, PPE and procedures to work safely
- Skills to identify exposed energized parts
- Methods to release victims from energized parts.
Training

Unqualified
- Electrical safety-related practices necessary for their safety
- If exposed to shock hazards:
  - Methods to release victims from energized parts
  - First aid and emergency procedures

Retraining
- Annual review indicates it
- New technology, equipment, or procedures
- Procedures not normally used
- Intervals not to exceed three years
- Annual refresher on CPR and AED

Training Documentation
- May be electronic or hard copy
- Content
- Employee’s name
- Dates
Equipment/PPE/Clothing

- Establish a unified commitment for using equipment PPE and protective clothing
- Ensure adequate funding is available for equipment and clothing needed.
- Make sure the employees use the protection suitable to the hazard level

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Equipment/PPE/Clothing

- Determine level of protection
  - Shock Risk Assessment
    - Table 130.4(D)(a)
    - Table 130.4(D)(b)
  - Arc Flash Risk Assessment
    - Incident Energy Calculations
    - Table 130.7(C)(15)(A)(a) and Table 130.7(C)(15)(A)(b) and Table 130.7(C)(15)(b)

- Ensure use
Maintenance and Special Equipment

Maintenance
- OSHA Regulations
- ASTM Standards
- Procedures in the absence of host maintenance records
- Manufacturers Recommendations and Requirements

Maintenance and Special Equipment

Special Equipment
- Proper training and supervision
- Properly installed equipment
- Proper access to equipment
- Availability of correct tools
- Proper identification and guarding
- Provision of complete/accurate circuit diagrams
- Maintenance areas around equipment
- Provision of adequate illumination
Audits

- Determine employee compliance annually
- Audit LOTO annually
- Verify written program principles and procedures compliance every three years.

Summary

- NFPA 70E Policy
- Host/Employer Responsibilities
- Written Program
- Training
- PPE and other Protective Equipment
- Maintenance
- Special Equipment
- Audit
NFPA 70E Contractor (Employer) Responsibilities
– Review Questions

1. Which of the following best describes the rationale for complying with NFPA 70E?

   a) NFPA 70E is an OSHA requirement
   b) NFPA 70E offers the only way to protect employees from electrical hazards
   c) NFPA 70E offers procedures agreed upon by industry to protect employees
   
   d) All of the above

NFPA 70E Contractor (Employer) Responsibilities
– Review Questions

2. Which of the following is an area management should provide oversight?

   a) Establish a policy for compliance with NFPA 70E
   b) Review written programs to make sure it addresses NFPA 70E compliance
   c) Ensure NFPA 70E training is provided by the company or another source such as a consultant
   
   d) All of the above
NFPA 70E Contractor (Employer) Responsibilities
– Review Questions

3. Per NFPA 70E host employers are required to report contractor employee violations to:
   a) Contractor employer
   b) OSHA
   c) Contractor employer and OSHA
   d) Neither

NFPA 70E Contractor (Employer) Responsibilities
– Review Questions

4. Who should sign off on an Energized Work Permit?
   a) The qualified employee performing work
   b) The supervisor
   c) Host employer
   d) All liable parties
NFPA 70E Contractor (Employer) Responsibilities
– Review Questions

5. What is the frequency set by NFPA 70E for performing an audit of qualified persons working in your employ?

   a) Every 1 year
   b) Every 3 years
   c) Every 5 years
   d) Never

Questions?

Don’t forget
Â 10:15 -11:30 am Opening General Session
Â 11:30 am-5:00 pm NECA Show Hours