



POWR-GARD SERVICES™

**CAN HELP YOU EVERY STEP OF THE WAY
TO OSHA COMPLIANCE**

Understand OSHA Requirements and NFPA

POWR-GARD Services can help you understand OSHA requirements to become compliant. We offer Arc-Flash and safety consulting services to help you understand electrical hazards and improve the safety of your workers.

Document and Evaluate your Electrical System

POWR-GARD's Safety experts can review or develop your facility one-line diagrams complete with all power sources, electrical components, and electrical equipment. We also offer Short Circuit and Coordination Studies to assess the hazards of your facility.

Electrical Hazards Assessment

Our team of safety engineers will inspect your electrical system and identify all potential hazards that your workers are exposed to. We will also calculate Arc-Flash incident energy levels, Shock and Arc-Flash protection boundaries, Hazard Risk Categories and required PPE.

Warning Labels Installation

Our labels not only meet the requirements for NEC 110.16, but provide all the information needed to better protect your workers and be in compliance with OSHA.

Electrical Safety Program Audit and Development

Our electrical design and safety engineers can review your existing safety program or develop one that meets the requirements of OSHA, NFPA and all other enforced codes and standards.

Qualified and Unqualified Workers Training

Our certified instructors can train your employees how to identify, assess and minimize electrical hazards, and how to improve equipment design, procedures and work practices.



**TO IDENTIFY AND REDUCE
HAZARDS CONTACT
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800-TEC-FUSE

www.littelfuse.com/services

**When it comes to
OSHA compliance
are you only getting
half of the story?**

**DON'T MAKE AN IMPORTANT DECISION
BASED ON LIMITED INFORMATION. GET
THE COMPLETE PICTURE REGARDING
OSHA COMPLIANCE REQUIREMENTS AND
HOW TO PROTECT YOUR WORKERS.**

How to Interpret OSHA Requirements FOR ELECTRICAL HAZARD ASSESSMENTS

WHAT: OSHA REQUIRES YOU TO COMPLY WITH 1910 SUBPART S

Standard 29 CFR 1910 Subpart S is OSHA's standard for safeguarding employees in the workplace. In order to be compliant in regards to electrical safety, all work must be done de-energized, with lock-out/tagout and adhering to the following standards: 1910.132(d), 1910.303(g)(2), 1910.331-1910.335 and the General Duty Clause.

HOW: NFPA 70E MUST BE FOLLOWED TO COMPLY WITH 1910 SUBPART S

NFPA® 70E is the consensus standard for electrical safety in the workplace. It was created to assist OSHA in preparing electrical safety standards that would serve their needs. OSHA is often considered the "what" and NFPA 70E the "how" in regards to electrical safety.

> What am I required to do to become OSHA compliant?

> How can I meet OSHA's requirements and become compliant?

1	You MUST identify all hazards above 50V.	> > >	NFPA 70E explains how to do a 50V Hazard Assessment (tables and calculations).
2	You MUST put safeguards in place for hazards above 50V.	> > >	NFPA 70E establishes Hazard Risk Categories, Protection Boundaries and Use of Work Permits.
3	You MUST train employees on safe work practices.	> > >	NFPA 70E defines qualified and unqualified workers training requirements.

> According to OSHA, the workplace should be free of recognized hazards, both actual and potential. Typical electrical hazards that endanger workers are:

- Arc-Flash and Arc-Blast
- Shock and Electrocution
- Fire and Explosion
- Toxic Gases, Sound and Light
- Improperly Protected Equipment
- Equipment Deficiencies
- Improperly Maintained Equipment
- Equipment with Improper SCCR

FAQs:

> What is IEEE 1584 and can I use it as a guideline to become OSHA compliant?

IEEE 1584 is a guide only to be used when performing Arc-Flash hazard calculations at 240V and above or when transformers are rated greater than 125 kVA. You will not be fully compliant if you use IEEE 1584 as your guide since you will be omitting hazards and exposing your workers to potential danger.

> Which guideline does OSHA use when inspecting a facility?

NFPA 70E. It was developed by OSHA's request. OSHA adheres to NFPA 70E and proclaims its use for de-energizing, developing safe work practices and conducting Electrical Hazard Assessments.

> Why are warning labels necessary?

Warning labels are the industry accepted way of identifying all potential hazards for the particular equipment, thus fulfilling OSHA's requirement to identify hazards and communicate them to workers.

> Where do I start?

You must conduct a Hazard Assessment to identify all potential hazards, including Arc-Flash.

> What information should I include on my warning labels?

According to NEC® 110.16 (the standard for Arc-Flash hazard labels), minimal Arc-Flash warning information is required. However, the industry trend is to include detailed data, such as Protection Boundaries, Incident Energy Levels, Hazard Risk Categories and PPE requirements.

WARNING

Arc-Flash and Shock Hazard
 Appropriate PPE Required

ARC-FLASH HAZARD BOUNDARY AND REQUIRED PPE			
Flash Hazard Boundary	8 inches	Hazard Risk Category	0
Incident Energy at 18" (cal/cm ²)	0.37 cal/cm ²	Glove Class	00
Required PPE	FR Underwear + FR Shirt & Pants		

SHOCK HAZARD APPROACH BOUNDARIES			
Shock Hazard	277 VAC		
Limited	42 inches	Restricted	12 inches
Prohibited	1 inch		

Equipment ID: **Panel L-10** Assessment Date: **7-11-06**

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