

Workgroup #1

Arc Flash

Subgroup 2

Arc Flash Training Requirements Sub
Group

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Focus of the Group

- Determine minimum content for arc flash training modules
- Determine target audiences

Arc Flash Training Content

The following are to be developed into modules:

1. NFPA 70E Content
2. Arc Flash Characteristics
3. The Calculation Process

Module 1: NFPA 70E Content

1.1 Labels

- Interpretations *the word according to Bryan*
- Requirements
- Understanding
 - Difference when door open / closed
 - Maintenance versus Operation

Module 1: NFPA 70E Content

1.2 PPE

- Requirements
- Inspection / Testing / Use
- Maintenance / Care / Cleaning
 - Owned versus Service Contract
 - Tools, etc.
- Labeling
 - Understanding
 - Requirements
- Storage

Module 1: NFPA 70E Content

1.3 Approach Boundaries

- Shock versus Arc Flash
- Relationship to Equipment
- Responsibilities
- Authorized Access
- Boundary Demarcation / Barrier

Module 2: Arc Flash Characteristics

- Short Circuit Current
- Upstream Clearing Time
- Affect on Equipment
- Arc Flash / Arc Blast Effects
 - Thermal
 - Expansion
 - Shock Wave
- Video Demo
- Anatomy of an Arc Flash

Module 3: The Calculation Process

Calculation Process

- Minimum Data Required
- Work Through Examples
 - 208 Volt
 - 480 Volt

This content can be taken from arc flash sub group 1.

Arc Flash Training

Target Audiences

- Qualified Electrical Worker (facility and R&D)
- Planners of Electrical Work
- Subcontractors
- Non-Electrical Worker
- Second Person (Buddy)
- Specific Task Qualified Worker
- Engineers

Arc Flash Training Content by Worker Type

- Qualified Electrical Worker (Facility & R&D)
 - NFPA 70E Content
 - Label Interpretations
 - PPE Requirements
 - Approach Boundaries
 - Arc Flash Characteristics
 - Short Circuit Current
 - Clearing Time
 - Affect on Equipment
 - The Calculation Process

Training Content by Worker Type

- Planner of Electrical Work (Facility)
 - NFPA 70E Content
 - Label Interpretations
 - PPE Requirements
 - Approach Boundaries
 - Arc Flash Characteristics
 - Short Circuit Current
 - Clearing Time
 - Affect on Equipment

Training Content by Worker Type

- Subcontractor Electrical Worker (On or Near)
 - NFPA 70E Content
 - Label Interpretations
 - PPE Requirements
 - Approach Boundaries
 - Arc Flash Characteristics
 - Short Circuit Current
 - Clearing Time
 - Affect on Equipment
 - The Calculation Process

Training Content by Worker Type

- Non-Electrical Worker (Site & Subcontractor)
 - NFPA 70E Content
 - Approach Boundaries (only)
 - Arc Flash Characteristics
 - Short Circuit Current
 - Clearing Time
 - Affect on Equipment

Training Content by Worker Type

- Second Person (Site & Subcontractor)
 - NFPA 70E Content
 - Label Interpretations
 - PPE Requirements
 - Approach Boundaries
 - Arc Flash Characteristics
 - Short Circuit Current
 - Clearing Time
 - Affect on Equipment

Training Content by Worker Type

- Specific Task Qualified Worker (Site & Sub)
 - NFPA 70E Content
 - Label Interpretations (As Needed)
 - PPE Requirements (As Needed)
 - Approach Boundaries
 - Arc Flash Characteristics
 - Short Circuit Current
 - Clearing Time
 - Affect on Equipment
 - The Calculation Process (As Needed)

Path Forward

- Need volunteers to develop/offer up training modules
 - 70E content
 - Arc flash characteristics
 - The calculation process
- Volunteer to assist with final products for COE, EFCOG, etc.
 - Qualified worker
 - Planner
 - Subcontractors
 - Non-electrical worker
 - Second person
 - Task specific