## Goal \#1: Understand NFPA 70E and Develop a Site Specific Written Safety Plan

70E-110.1(A): "The employer shall implement and document an overall electrical safety program that directs activity appropriate to the risk associated with electrical hazards." 70E-110.1(H): "The electrical safety program shall include a risk assessment procedure and shall comply with $110.1(\mathrm{H})(1)$ through $110.1(\mathrm{H})(3)$. ."

## Goal \#2: Train and Qualify Employees in Accordance With NFPA 70E Compliance Guidelines

70E-105.3(A): The employer shall have responsibilities to (1) "establish, document, and implement the safety-related work practices and procedures required by this standard", (2) "provide employees with training in the employer's safetyrelated work practices and procedures".70E-110.2(A): Training requirements "shall apply to employees exposed to an electrical hazard when the risk associated with that hazard is not reduced to a safe level by the applicable electrical
 operation of equipment or a specific work method and be trained to identify and avoid the electrical hazards that might be present with respect to that equipment or work method."

## Goal \#3: Establishing an Electrically Safe Work Condition

70E-120.1(A): Each employer shall establish, document, and implement a lockout/tagout (LOTO) program and procedures to safeguard workers from exposure to electrical hazards. 70E-205.2: "A single-line diagram, where provided for the electrical system, shall be maintained in a legible condition and shall be kept current."

## Goal \#4: Perform a Shock Risk / Arc-Flash Risk Assessment and Apply Labels

70E-130.4(A): A shock risk assessment shall determine the voltage to which personnel will be exposed, the boundary requirements, and the PPE necessary in order to minimize the possibility of electric shock to personnel.
70E-130.5(A): "An arc flash risk assessment shall be performed:"
(1) "to identify arc-flash hazards"
(2) "to estimate the likelihood of occurrence of injury or damage to health and the potential severity of injury or damage to health"
(3) "to determine if additional protective measures are required, including the use of PPE"

70E-130.5(H): "Electrical equipment such as switchboards, panelboards, industrial control panels, meter socket enclosures, and motor control centers that are in other than dwelling units and that are likely to require examination, adjustment, servicing, or maintenance while energized shall be field-marked with a label containing all the following information:"
(1) Nominal systemvoltage
(2) Arc flashboundary
(3) At least one of the following:
a. Available incident energy and the corresponding working distance, or the arc flash PPE category in

Table $130.7(C)(15)(a)$ or Table $130.7(C)(15)(b)$ for the equipment, but not both
b. Minimum arc rating of clothing
c. Site-specific level of PPE
"The method of calculating and data to support the information for the label shall be documented."

## Goal \#5: Provide the Appropriate Personal Protective Equipment (PPE)

70E-130.7: "When the employee is working within the restricted approach boundary, the worker shall wear PPE in accordance with 130.4. When an employee is working within the arc flash boundary, he or she shall wear protective clothing and other PPE on accordance with 130.5. All parts of the body inside the arc flash boundary shall be protected"

## Goal \#6: Perform Preventative Maintenance on Electrical Equipment

130.5(B): The estimate of the likelihood of occurrence of injury or damage to health and potential severity shall take into consideration the following:
(1) The design of the equipment, including its overcurrent protective device and operating time
(2) The electrical equipment operating condition and condition of maintenance.
" 70E-205.3: "Electrical equipment shall be maintained in accordance with manufacturers' instructions or industry consensus standards to reduce the risk associated with failure" and the subsequent exposure of employees to electrical hazards. 70E-205.3 Informational Note: "Common industry practice is to apply test or calibration decals to equipment to indicate the test or calibration date and overall condition of equipment that has been tested and maintained in the field."

## What is the relationship between OSHA and NFPA 70E?

NFPA 70E is considered a national consensus standard and is intended for use by employers, employees, and OSHA. OSHA has not "adopted" NFPA 70E, simply because adoption would require a lengthy and expensive process. OSHA has instead referenced compliance to NFPA 70E using section 5(a)(1) of the Occupational Safety and Health Act of 1970, commonly referred to as the "general duty clause" as their basis of implementation. The general duty clause states that employers "shall furnish to each of his employees: employment and place of employment which are free from recognized hazards that are causing or are likely to cause death or serious physical harm to its employees."
It is clear that OSHA is using NFPA TOE as a national consensus standard. Furthermore, OSHA expects employers and employees to comply with the provisions of NFPA 70E, regardless of whether or not it has been "adopted" as an OSHA requirement.

