

# 2021 Updates to NFPA 70E<sup>®</sup>, *Standard for Electrical Safety in the Workplace*<sup>®</sup>

The National Fire Protection Association (NFPA) 70E, *Standard for Electrical Safety in the Workplace*, is a national consensus standard developed to help you avoid workplace injuries and fatalities due to electrical hazards. In June 2020, NFPA 70E was revised and the 2021 version was released. This document provides an overview of the key revisions to NFPA 70E in 2021. Use this information to update your electrical safety program and practices.

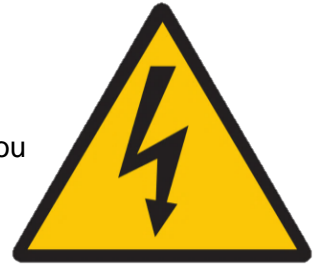


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## REVISED TERMS AND DEFINITIONS

NFPA 70E 2021 adds new terms and provides several updates to definitions to promote understanding. Some notable additional terms are **balaclava** and **electrically safe work condition**. There was also a revision of the term **nominal voltage**.

**Balaclava:** Replaces “hood” and “sock” as a facial covering protecting the neck and head.

**Electrically safe work condition:** This term focuses on the temporary elimination of the electrical hazard. The term does not infer a procedure, but instead emphasizes the hazardous conditions a person could be exposed to are temporarily in a de-energized state.

**Nominal voltage:** The term was amended to address those battery systems rated at 48 Vdc<sup>1</sup>, but have a charging float voltage capable of reaching 58 Vdc (important since NFPA 70E is for any voltage greater than 50 Vdc).

## ARTICLE 110 (GENERAL REQUIREMENTS) MAJOR CHANGES:

**110.3 Electrically Safe Work Condition.** Moves the requirement up from Article 130.2, emphasizing de-energizing is a requirement of an Electrical Safety Program (now earlier than lockout requirements).

**110.3(C) Documentation.** Adds an informational note, stating for multi-employer sites, there can be one more employer charged with the responsibility of identifying hazardous conditions.

**110.4(A) Testing.** Replaces a text reference of “voltages equal to or greater than 50 Vdc” to now read “where an electrical hazard exists.”

**110.5(A) Electrical Safety Program.** Moved all references to safety management systems and safety management standards to an informative annex.

**110.5 (K) Electrically Safe Work Policy.** Cross-references section 110.3 and matches requirement in Article 120, stating it is a part of the employer’s electrical safety program.

**110.12 Equipment Use.** A new section emphasizing all equipment shall be used in accordance with the manufacturer’s instructions.



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<sup>1</sup> Vdc – Volts Direct Current

## ARTICLE 120 (ESTABLISHING AN ELECTRICALLY SAFE WORK CONDITION) MAJOR CHANGES:

**120.2(B) Lockout/Tagout Procedure.** Added text to specifically state lockout/tagout procedures “shall meet the requirements of applicable codes, standards, and regulations for lockout and tagging of electrical sources.”

**120.3(C) Lockout Device.** Expanded the section to now align with OSHA 1910.333(b)(2)(iii)(E).

**120.5 Process for Establishing and Verifying an Electrically Safe Work Condition. 120.5(5).** Provides text with mention of limiting non-electrical devices which could accidentally re-energize the device.

**120.5(7).** A cross-reference to Underwriters Laboratories® (UL) Standard “UL 1436, *Outlet Circuit Testers and Other Similar Indicating Devices.*”

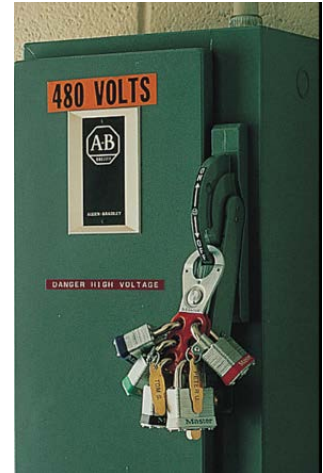


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## ARTICLE 130 (WORK INVOLVING ELECTRICAL HAZARDS) MAJOR CHANGES:

**Sections 130.1–130.3.** Rewritten due to relocating previous verbiage from 2018 version to Section 110.3.

**130.4(B) Estimate of Likelihood and Severity.** Risk assessment language to assess potential severity of injury or damage due to electrical equipment design or operating conditions (now aligns with Section 130.5).

**Table 130.5(C) Estimate of the Likelihood of Occurrence of an Arc Flash Incident for alternating (ac) and direct (dc) current Systems.** Adds new task and specifically addresses operation of a circuit breaker for first time after maintenance is performed or after it is installed.

**130.5(G) Incident Energy Analysis Method.** Added informational note (e) addressing arc rating of outer layers worn of arc-rated clothing. The simplest translation is, arc-rated outwear may not be required for some operations.

**2021 NFPA 70E ARTICLE 360.** New article containing six sections to address safety-related requirements for capacitors. In addition to scope and definitions, the other four sections focus on:

- 360.3 Stored Energy Hazard Thresholds
- 360.4 Specific Measures for Personnel Safety
- 360.5 Establishing an Electrically Safe Work Condition for a Capacitor(s)
- 360.6 Grounding Sticks



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