

# NFPA 110



*Discussion of proposed changes to the NFPA 110 Standard and what they mean for the genset industry*

**MODERNIZING**  
**CRITICAL POWER**

*Steve Works, NFPA 110 Technical Committee Member*



# Goals for Modernizing Critical Power

- Educate and build community
- Open dialogue and conversation
- Encourage coming on video with us to ask your questions and share your experience. Just raise your hand or throw your question in the chat!



# About This Webinar Series



## When

Every 3rd Thursday at 10:30 AM  
Mountain Time

Add it to your calendar and don't miss  
this live conversation each month!

Every episode is recorded and will be  
available on our website.



## What

Many topics planned, including:

- *Hardened Switchmode Technology*
- *How to read specifications*
- *And more*

But we also want to hear specific topic  
ideas from you!

# NFPA 110:

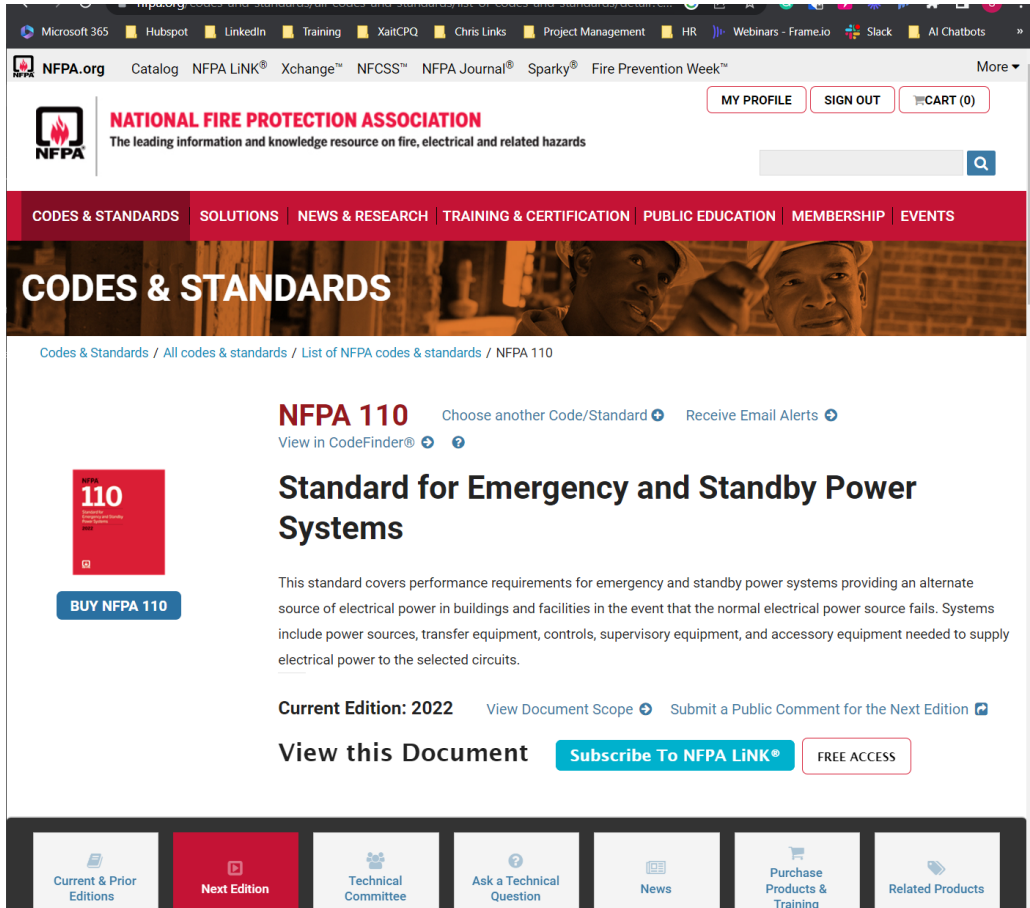
## Standard for Emergency and Standby Power Systems

- This standard covers performance requirements for emergency and standby power systems providing an alternate source of electrical power in buildings and facilities in the event that the normal electrical power source fails.
- Systems include power sources, transfer equipment, controls, supervisory equipment, and accessory equipment needed to supply electrical power to the selected circuits.



# NFPA 2025 proposed changes

# How to add your public comments to the NFPA 110 2025 proposed changes



- Visit the NFPA 110 website through this link:
- <https://www.nfpa.org/codes-and-standards/all-codes-and-standards/list-of-codes-and-standards/detail?code=110&tab=nextedition>
- Click on the next edition Button
- Click on the First Draft Report and sign-in to your account



# 5.6 Prime Mover Starting Equipment

## Section 5.6.4.5 Type of Battery

### NFPA 2022:

The battery shall be of the nickel-cadmium, or lead-acid type.

### NFPA 2025:

The battery shall be nickel-cadmium, lead-acid, **nickel-zinc, lithium-ion, or other stored energy technology capable of providing sufficient established prime mover cranking cycles.**



## 8.3.6 Maintenance and Operational Testing

## Section 8.3.6

### NFPA 2022:

Storage batteries, including electrolyte levels or battery voltage, used in connection with starting and control systems shall inspected weekly and maintained in full compliance with manufacturers' recommendations.

### NFPA 2025:

*Section removed*

# Section 8.3.6.1

## NFPA 2022:

Maintenance of lead-acid batteries shall include the monthly testing and recording of electrolyte specific gravity. Battery conductance testing shall be permitted in lieu of the testing of specific gravity when applicable or warranted.

Batteries, including electrolyte levels or battery voltage, used in connection with starting and control systems shall be inspected weekly and maintained in full compliance with manufacturers' recommendations.

## NFPA 2025:

**Level 1 EPS storage** batteries used in connection with starting and control systems shall be inspected weekly and maintained in full compliance with manufacturers' recommendations, including electrolyte levels and battery voltage.

# Section 8.3.6.1.1

## NFPA 2022:

Maintenance of lead-acid batteries shall include the monthly testing and recording of electrolyte specific gravity.

## NFPA 2025:

**Non-maintenance-free** batteries shall **be tested** monthly **for electrolyte-specific gravity or other maintenance practices as required for the battery type.**

## Section 8.3.6.1.2

### NFPA 2022:

Battery conductance testing shall be permitted in lieu of the testing of specific gravity when applicable or warranted.

### NFPA 2025:

**Maintenance-free batteries shall be tested monthly using one of the following methods:**

1. Battery conductance testing
- 2. Ohmic testing**
- 3. Carbon pile load testing**
- 4. Cranking voltage drop testing**

# Appendix 8.3.6.1.2

## A.8.3.6.1.2

Priority should be given to the education and training of individuals regarding potential safety hazards when choosing the appropriate battery test.

### A.8.3.6.1.2(4)

Examples of cranking voltage drops are shown in Table A.8.3.6.1.2(4).

Table A.8.3.6.1.2(4) Initial Cranking Voltage Drop for Starter Viability

Temp. [°C (°F)]	21.1 (70)	15.6 (60)	10 (50)	4.4 (40)	-1.1 (30)	-6.7 (20)	-12.2 (10)	-17.8 (0)
Min. Volts (12 VDC)	9.6	9.5	9.4	9.3	9.1	8.9	8.7	8.5
Min. Volts (24 VDC)	19.2	19	18.8	18.6	18.2	17.8	17.4	17

# Questions?



# MGI

MOTOR AND  
GENERATOR  
INSTITUTE

A training certificate from MGI shows you are well-versed in current codes, standards, manufacturer requirements, and AHJ expectations.



For more questions: [steve.works@mgisys.com](mailto:steve.works@mgisys.com)

<https://www.mgiepss.com/certification/>



# Upcoming Episode

May 18th, 10:30 AM MT

## Hardened Switchmode Technology



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