



Committee Meeting Agenda & Minutes

Codes & Standards

Committee Meeting Objective: Report, discuss, and learn about the latest updates in national codes and standards affecting the EGSA members.

Date and Time: Monday, October 4th, 2021

Location: Orlando, FL– Room: Java Sea

Time: 1:00 - 5:30p.m.

Chairperson: Jeff Jonas

Schedule

List leaders and a description for each topic or activity.

| Item | Description | Conclusion |
|--|------------------------------|---|
| Welcome, review committee initiative, missions statement, meet your 2021 Fall leadership | Robert Simmons, Jeff Jonas | Meeting Called to Order and Reviewed Mission Statement. Introduced new Chair (Jeff Jonas), Vice Chair (Keith Page), and Secretary (Brady Eifrid) |
| Review and Update Membership | Keith Page | Issued the membership attendance list |
| Meeting Minutes from Spring 2021 | Keith Page | Approved and no requests for changes |
| Consumer Product Safety Standards on Gensets | Jeff Jonas | Presented on UL, CSA and ETL examples on standard requirements for North America and NFPA installation requirements |
| EGSA Code Surveillance | Jeff Jonas | Reviewed summary excel documents containing extensive list on applicable requirements as they relate to EGSA and supplemental power |
| Working group updates UL 2200 | Jeff Jonas, Steve Sappington | Discussed Results/outcomes from Working Group on ULC 2200 Sunday afternoon. Now includes medium voltage within the scope. Tim Evans and George Langton from UL did field questions and comments. |
| IBC, ASCE, BSSC, Seismic certification | Robert Simmons | Discussed updates on construction requirements regarding structural requirements; IBC 2021 can't adopt ASCE 7-2022 until 2024 Discussed potential for working group on attempting to develop more formalized standard on how to get seismically certified products |
| Diesel Fuel Working Group for NFPA 110 | Steve Sappington | Generated recommendations on fuel quality within the Annex (non-required) – working group closed |

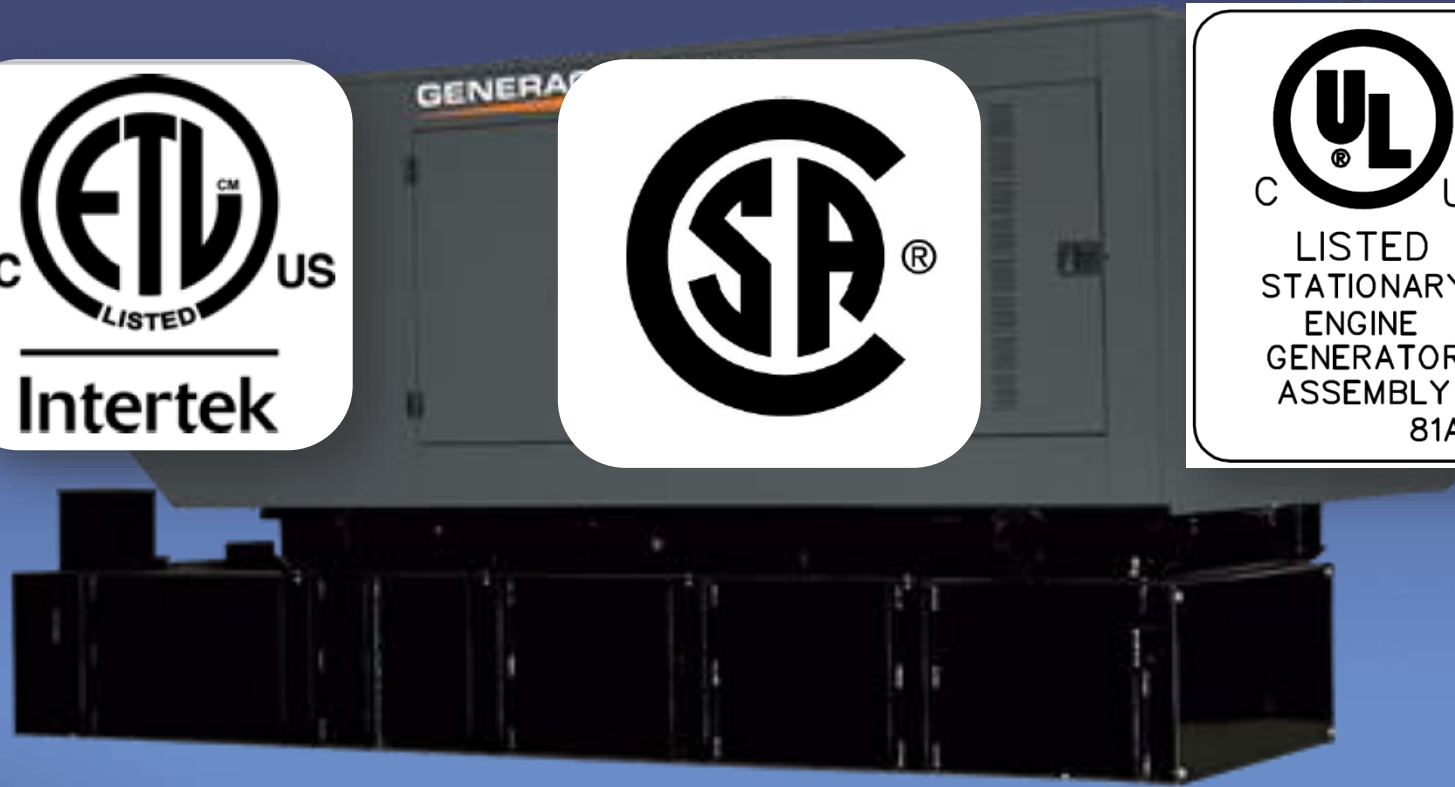
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|--|------------------------------|--|
| Hydrogen Discussion | Jeff Jonas, Steve Sappington | Mentioned potential speaker to provide insight on use of hydrogen and blended hydrogen fuel sources |
| NFPA 110, 111 (emergency and standby power systems; stored energy) | Jeff Jonas | Public input closing June 1, 2022 – Mentioned getting involved on the TC for 110 |
| UL 2201 (portable Generators) | Jeff Jonas | Reviewed coverage of CO requirements |
| UL 1008 (transfer switch equipment) | Sie Teong | 9 th edition went up for vote Aug 2021. Discussed summary of updates |
| ULC 6200 (power production controls) | Jeff Jonas | Is now published for North America covering power production controls |
| UL1778 (uninterruptable power systems) | Jeff Jonas | No news, volunteer position open to follow this |
| UL 2900 (cyber-security) | Jeff Jonas | No news |
| NFPA 99 (health care facilities code) | Steve Sappington | Reviewed updates on 2 nd draft – no significant changes at this time |
| IAEI International Association of Electrical Inspectors) No codes or standards. IAEI uses the NEC. Chapter meetings are an outlet for manufacturers to share information about their product. They are open to a presentation at their local chapter meetings | Steve Sappington | International Association of Electrical Inspectors – group is looking to reach out to other applicable organizations. No other news |
| NFPA 70 (National Electric Code) | Jeff Jonas | Second Draft Meetings set for mid-October. Code Panel 13, definitions moved to article 100. Requirements for bypass isolation reviewed. Reviewed requirements for disconnects being grouped together |
| NFPA 37 (Installation and Use of Stationary Combustion Engines and Gas Turbines) | Keith Page | Public input ending in Jan 2021. |
| IEEE 3000 (Color Books) | Jeff Jonas | No news |
| NECA (National Electrical Contractors Association) | Jeff Jonas | No news |
| PGMA (Portable Generator Manufacturers Association) | Jeff Jonas | No news |
| <i>Emergency Response Coordination</i> NFPA 1600- Standard on Continuity, Emergency, and Crises Management FEMA – UL3741-PV emergency response | Jeff Jonas | No news |
| EGSA | Jeff Jonas | Reviewed trainings on technician training and microgrids |
| Panel of EGSA Experts – Any Important News of Major Initiatives | Keith Page, Jeff Jonas | Discussed potential options and request for volunteers to support public questions as experts (behind the scenes) to field general questions. |
| Motion to Adjourn | Jeff Jonas | Adjourned |

Agenda:

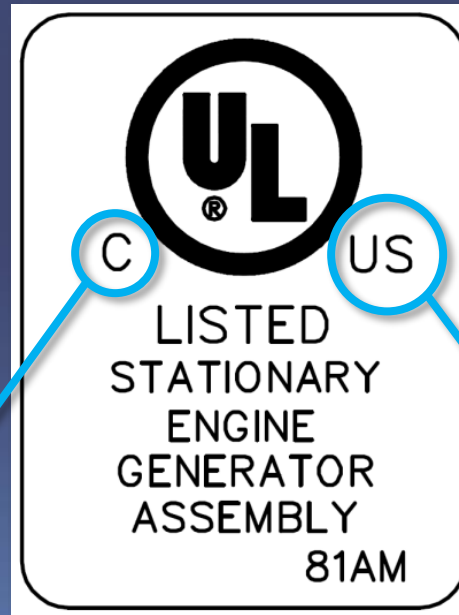
- *Regulatory requirements*
- *Installation requirements and considerations*
- *Industry trends*

Regulatory requirements-Overall

How do you know if this product is reliable and safe?



Regulatory requirements-Engine Generators



CSA C22.2 No. 100 -
Motors and Generators

UL 2200-
Stationary Standby Generators

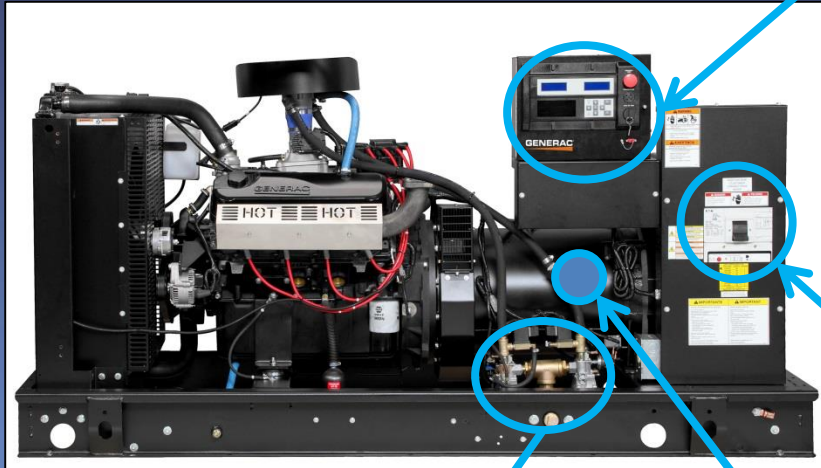
Regulatory requirements-Base Tank



CAN-ULC-S601
Shop fabricated steel
aboveground tanks for
flammable and
combustible

UL 142
Aboveground Tanks for
Flammable and
Combustible Liquids

Regulatory requirements-Components



UL 6200-Controls for Stationary Engine Driven Assemblies

UL 1236-Battery Chargers for Engine-Starter Batteries

UL 840-Insulation Coordination ... for Electrical Equipment

UL 746-Polymeric materials – Use in Electrical Equipment...

UL 489-Molded Case Circuit Breakers, ...

UL 869A-...service equipment

UL 429-Electrically Operated Valves

UL 1004-Rotating Electrical Machines

Installation requirements and considerations

NFPA 70-The National
Electrical Code (NEC)

C22.1-15-Canadian
Electric Code, part I

NFPA 37-Installation
and Use of Stationary
Combustion Engines
and Gas Turbines

NFPA 54-National
Fuel Gas Code (NEC)

B149.1-15-
Canadian Natural
Gas and Propane
installation code



State and local codes

Manufacturer's
instructions

NFPA 37-Installation and Use of Stationary Combustion Engines and Gas Turbines

4.1.4 Engines Located Outdoors.

4.1.4.1

Engines and, if provided, their weatherproof housings that are installed outdoors shall be located at least 1.5 m (5 ft) from any openings in the walls of structures.

4.1.4.2

Engines and, if provided, their weatherproof housings that are installed outdoors shall be located at least 1.5 m (5 ft) from structures having combustible walls except as provided in 4.1.4.2.1 through 4.1.4.2.4.

4.1.4.2.1

A clearance less than 1.5 m (5 ft) shall be permitted where all portions of structures that are closer than 1.5 m (5 ft) from the engine enclosure have a fire resistance rating of at least 1 hour.

4.1.4.2.2 *

A clearance less than 1.5 m (5 ft) shall be permitted where a fire test involving consumption of the available combustibles, within the engine or, if provided, its weatherproof housing demonstrates that a fire originating at the engine or its weatherproof housing will not ignite combustible structures.

Agenda:

- *Regulatory requirements*
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Industry trends

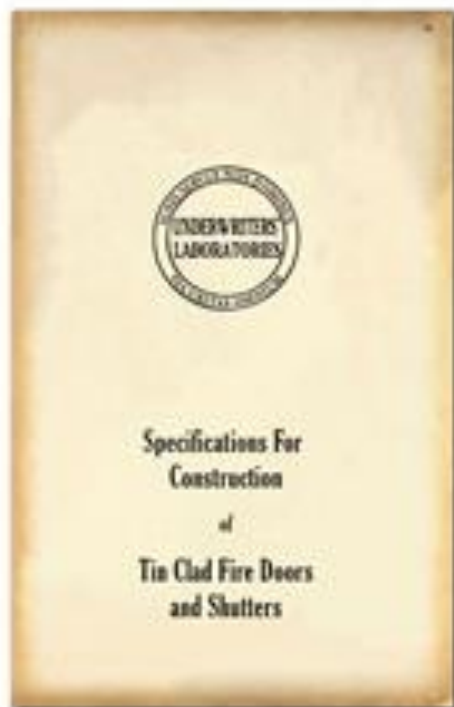
- *Power Quality*
- *Natural gas as a reliable source of fuel. Hydrogen next.*
- *Remote monitoring*
- *Technically competent technicians*
- *Performance and Reliability testing*

Industry trends – Natural Gas as a reliable fuel

| Unit | Article 700 Emergency | Article 701 Legally Required Standby | Article 702 Optional Standby | Article 708 Critical Operations Power |
|--------------------------------|---------------------------------|---|------------------------------------|--|
| | 2-hrs full-demand 10-seconds | 2-hrs full-demand 60-seconds | | 72-hrs full-load DCOA |
| Diesel | OK | OK | OK | OK |
| SI Natural Gas (Utility) | AHJ acceptance | AHJ acceptance | OK | Not Accepted |
| Bi-Fuel | OK | OK | OK | OK |

Maintenance is a very important key to a Reliable engine generator





1903 First Standard for Safety

UL publishes its first Standard for Safety, titled "Tin Clad Fire Doors."

UL1008 Update

Oct 4th 2021

- 9th edition of UL1008 went up for a vote by the STP in August 2021.
 - Consensus was reached and the 9th edition will be published soon.
- Short summary of changes in 9th edition
 - Marking requirements(Improve consistency) --- Annex I
 - Annex J update on power inlet boxes.
 - Editorial changes when it comes to values of time, voltage, force etc etc to have “a minimum of” added in front of the values.
 - Annex I Revised LSI breaker markings.
 - Annex K Arc Resistance Design

UL1008 Update

- Annex L Electromagnetic Compatibility
- Annex M Cord Connect Transfer Switch Equipment
- Revised Marking/Instruction for Short Circuit Withstand rating when protected by fuses.
- Changes to align with NEC
- Inlets 100A or greater requires interlock disconnect
 - Two exceptions are:-
 - If the inlets are suitable for disconnecting under loads.
 - If the install is under a supervised industrial install with a specific dedicated space for the generator which is located within sight of the inlets.
- Annex N Meter socket Transfer Switch.



Action Items (additional space on back)

| Item | Person Responsible | Deadline |
|------|--|---|
| Task | Name of person assigned to complete task | Date and time task should be completed. |
| | | |
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Codes and Standards Surveillance Committee Mission Statement:

Represents EGSA and its members' interests on select national and international industry codes and standards committees and reports back to the membership through *Powerline* magazine, Committee meetings, Action Alerts, and e-mail blasts. The Committee also:

- Develops recommendations and provides action regarding industry codes and standards development and review by request and as needed
- Surveys the membership and other industry professionals to determine the applicable standards it should monitor
- Provides the Association with a platform from which it may develop Recommended Practices for the proper application of codes and standards within the industry
- Educates EGSA members on standards, their application and interpretation