

# COMPLIANCEnews



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## THE NFPA 110 INSTALLATION ACCEPTANCE TEST

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Many hospitals are installing new or replacement emergency power systems. NFPA 110 requires a special testing sequence before the system may be used.

Although the NFPA 110-2005 edition is referenced by the 2010 FGI Guidelines for Design and Construction of Healthcare Facilities, readers should review the updated and considerably improved Installation Acceptance Test in Section 7.13 of NFPA 110-2010 ([www.nfpa.org/110](http://www.nfpa.org/110)). The 2010 update was rewritten to clarify the intent of the testing. If a project team is considering deviating from verbatim NFPA 110 requirements because of facility-specific differences, all necessary authority having jurisdiction (AHJ) approvals should be obtained.

Some of the major requirements of the NFPA 110-2010 Installation Acceptance Test include:

- This is the final approval test for all EPSSs, and it must be passed before the EPSS is considered to meet NFPA 110.
- The test is conducted after completion of the installation with all EPSS accessory and support equipment in place and operating.
- The AHJ must be given advance notification of the test time so that the AHJ may witness the test.
- There are two options for starting the first part of the test, depending upon the status of the facility:
  - In a new and unoccupied building or facility, turn off normal power to the building or facility.
  - In an existing occupied building or facility, either simulate a normal power failure by operating at least one transfer switch test function or turn off normal power

to the transfer switches fed by the EPSS.

- Paralleled generators are operated simultaneously with building load for not less than 90 minutes. There is no minimum loading requirement for this part.
- The engine start function is confirmed by verifying operation of the initiating circuit of all transfer switches supplying EPSS loads.



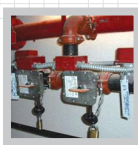
- After a cool down period of not less than five minutes, the second part of the test (a two-hour full-load test) is conducted. The building load may be used but must be supplemented by a load bank if necessary to get to 100 percent of the generator nameplate kW rating. This part, which previously required a 100% block load step, may now be not less than 30% for the first 30 minutes, not less than 50% for the next 30 minutes, and finally 100% for the final 60 minutes. A unity power factor (resistive load bank) is permitted for on-site testing, provided that rated load tests at the rated power factor have been performed by the manufacturer of the EPS prior to shipment. This second part of the test can be performed on paralleled generators one at a time.

- There are numerous subtests and readings stipulated in 110 – be sure to comply with them all.

At the conclusion of the acceptance testing, it will also be necessary to perform the first monthly emergency power supply system (EPSS) test in accordance with the following paragraphs from NFPA 110-2010, 8.3 Maintenance and Operational Testing:

“8.3.2 A routine maintenance and operational testing program shall be initiated immediately after the EPSS has passed ac-

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## THE NFPA 110 INSTALLATION ACCEPTANCE TEST *(Continued from page 1)*

ceptance tests or after completion of repairs that impact the operational reliability of the system.

8.3.2.1 The operational test shall be initiated at an ATS and shall include testing of each EPSS component on which maintenance or repair has been performed, including the transfer of each automatic and manual transfer switch to the alternate power source, for a period of not less than 30 minutes under operating temperature."

**NFPA DISCLAIMER:** *Although the author is Chair of the NFPA Technical Committee on Emergency Power Supplies, which is responsible for NFPA 110 and 111, the views and opinions expressed in this message are purely those of the author and shall not be considered the official position of NFPA or any of its Technical Committees and shall not be considered to be, nor be relied upon as, a Formal Interpretation. Readers are encouraged to refer to the entire text of all referenced documents. NFPA members can obtain NFPA staff interpretations at [www.nfpa.org](http://www.nfpa.org).*

## CMS EASES HOSPITAL CORRIDOR CLUTTER WAIVER PROCESS

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CMS issued new Survey and Clarification Memo # S&C-12-21-LSC, which applies to both hospitals and nursing homes, on March 9, 2012. CMS is easing its process for obtaining waivers in order to take advantage of four provisions in the NFPA 101 Life Safety Code® 2012 edition. CMS will now "allow providers to implement these four changes by considering waivers of the current LSC requirements found in the 2000 edition of the LSC without showing 'unreasonable hardship'." The four 2012 Life Safety Code® portions referenced by CMS are 18/19.2.3.4 under Capacity of Means of Egress; 18/19.3.2.5.2, 18/19.3.2.5.3, 18/19.3.2.5.4 and sections 18/19.3.2.5.5 under Cooking Facilities; 18/19.5.2.3(2), (3) and (4) under Heating, Ventilating, and

Air Conditioning; and 18/19.7.5.6 under Furnishings, Mattresses, and Decorations. CMS stated "Due to the complex nature of some of the requirements, each waiver request will have to be evaluated separately in the interest of fire safety and to ensure that the facility has followed all LSC requirements and the equipment has been installed properly by the facility."

ASHE members should have already received both an ASHE Advocacy Alert and Issue Brief regarding this topic. Since CMS waivers are issued after adverse findings during validation surveys, our recommendation is that organizations stay tuned and follow the development of this issue. As of this writing The Joint Commission has not commented publically.

## PUBLICATIONS AND SEMINARS

### Publications

"Smooth Start - Ensuring Emergency Power System Performance," *Health Facilities Management*, February 2012

### Seminars

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|------------------|--|
| April 30 - May 1 | Texas Association for Healthcare Facilities Management (TAHFM) Interlink, Arlington, TX, "NFPA 110/111 Update" and "NFPA Standards Panel"  |
| May 4            | Florida Healthcare Engineers Association Spring Meeting, Howey-in-the-Hills, FL, "Selling the Maintenance Mission"   |
| June 11-14       | NFPA Annual Conference, Las Vegas, NV, "Managing Hospital Electrical Shutdowns in 2012 and Beyond" and "NFPA 110-2013 & NFPA 111-2013 Revisions"   |
| June 26          | MHA Society for Healthcare Engineers and Facility Managers Conference, Bay St. Louis, MS, "Continuous Compliance - Maintaining Constant Survey Readiness"  |
| July 15-18       | ASHE Annual Conference, San Antonio, TX, "Managing Hospital Electrical Shutdowns" and "NFPA 110/111 Changes for 2013"  |
| November 7-9     | Midwest Healthcare Engineering Conference, Indianapolis, IN, "Continuous Compliance - Maintaining Constant Survey Readiness" and "NFPA 110/111 Update - Paying More Attention to EP Reliability" |