



Optimizing health care facilities

Q1 ASHE Sustainability and Advocacy Liaison Webinar

26 February 2020

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a professional membership group of the American Hospital Association
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Agenda

1. NFPA Update
2. Energy Target
 - a. Energy to Care Workshops
3. ASHRAE Update
4. Energy to Care Awards and Chapter Challenge
5. FGI, USP & ICC Update
6. Energy to Care Treasure Hunt
7. 2020 Webinar Dates
8. Upcoming Events

NFPA Update

NFPA 99 & 101

- Second Draft Reports Posted 22 January 2020
 - NFPA 99 152 proposed changes submitted - 48 rejected
 - NFPA 101 146 proposed changes submitted – 59 rejected
- NITMAM Closing Date was 19 February 2020
- NITMAM Posting Date 1 April 2020

NFPA 99 2nd Draft Report

- Revision No. 974 & 973
– Microgrids

6.10 Health Care Microgrids. (Reserved)

6.10.1 General Requirements.

6.10.1.1 Applicability. (Reserved)

6.10.1.2* Purpose.

The purpose of Section 6.10 shall be to describe requirements for multiple-source health care microgrid systems, ac or dc, utilized as all or a portion of EPSSs for health care facilities.

A.6.10.1.2

Health care facilities are increasingly implementing various on-site generation using a wide variation in technologies. These designs optimize the use of different sources both on and off site and provide numerous advantages, including resilience, efficiency, lowered operating costs, and reduced environmental impact. Health care microgrids with sophisticated controls and bundles of sources and storage assets can provide better outcomes than the conventional design that envisions a "normal" and an "emergency" source.

6.10.1.3* Campuses.

Health care microgrids shall be permitted to serve individual buildings or campuses consisting of several buildings.

A.6.10.1.3

Areas served by health care microgrids should be identified.

NFPA 99 2nd Draft Report

- Revision No. 998 – RPT's

10.2.3.6* Relocatable Power Taps (RPTs) .

Relocatable power taps (RPTs) shall be permitted to be used to supply power to plug-connected components of a movable equipment assembly that is pole-, rack-, table-, pedestal-, or cart-mounted, provided that all of the following conditions are met:

(1)* The ~~receptacles are~~ RPT is securely attached ~~to the equipment assembly~~ .

A.10.2.3.6(1)

Tape, adhesive, and hook-and-loop fasteners are not considered to be secure means of attachment. A clamp or bracket that has been hand or tool tightened is considered securely attached.

(2)* The sum of the ampacity of all appliances connected to the outlets does not exceed 75 percent of the ampacity of the flexible cord supplying the ~~outlets~~ RPT .

(3) The ampacity of the flexible cord is in accordance with *NFPA 70*.

(4) The RPT attachment plug must not be connected to another RPT or extension cord.

(5) The electrical and mechanical integrity of the assembly and its securement method are regularly verified and documented.

NFPA 99 2nd Draft Report

- Revision No. 942 – Removal of Outlets

5.1.14.3.5*

When clinical spaces are converted to nonclinical spaces, medical gas inlets and outlets that are not accessible for maintenance and testing shall be either removed or decommissioned.

A.5.1.14.3.5

When spaces are converted, the inlets and outlets should be addressed in one of the following ways:

- (1) Inlets and outlets removed and tubing capped
- (2) Inlets and outlets plugged and provided with a blank-off plate
- (3) Inlets and outlets remain accessible for maintenance and testing
- (4) Other means deemed appropriate by the AHJ

Proper decommissioning of systems should include identifying them as not in service. The associated zone valve box and alarm panels should be kept up-to-date with the changes made to rooms no longer served.

NFPA 99 2nd Draft Report

- Revision No. 981 – Scope Applicability

1.3.1.3*

Facilities that employ systems, equipment, or appliances that are subject to regulation by this code shall not be required to be subject to any other provisions of this code unless so directed by the scope of the individual chapter(s) of this code or as directed by the authority having jurisdiction's adoption of this code.

A.1.3.1.3

This subsection clarifies that if a provision of this code becomes applicable due to the installation or use of a system, equipment, or assembly regulated herein, the facility does not automatically become subject to the code in its entirety.

NFPA 99 2nd Draft Report

- Revision No. 977 – Design to higher risk category

4.1.5*

Activities, systems, and equipment shall be permitted to be designed to a higher risk category.

5.1.1.6

~~Medical gas outlets and inlets in Category 1 spaces (see 3.3.137.1) shall be supplied only from sources and through piping networks compliant with Section 5.1. Category 1 systems shall be permitted to serve spaces identified as Category 1, Category 2, or Category 3.~~

Category 1, Category 2, or Category 3. The converse is not allowed. For example, a required Category 1 system must be designed to a Category 1 and cannot be designed to a Category 2, Category 3, or Category 4.

- Revision No. 949 –
Accessibility of Valves

5.1.14.7.11*

Access to valves and alarms shall be made part of the standard operating procedures for the facility and shall include the following.

- (1) No items are to be placed in front of or affixed to any alarm panel that would restrict the view or diminish the sound of the alarm.
- (2) Valves in secured areas are to be specified as follows:
 - (a)* The valve is visible from the intended operator's position.

A.5.1.14.7.11(2)(a) _

The intended operator's position is where the person who will operate the valve can see and reach the valve to open or close it. This can involve opening access doors, standing on a ladder, or other actions that would put the operator into the correct position.

- (b) The valve is operable with no more than ordinary aids, such as a ladder.
- (c) If the valve is provided with security hardware, such hardware is visible and readily removeable when needed.

A.5.1.14.7.11

Accessibility of valves and the visibility and audibility of alarms are inherent to the functions for which they are installed. The hazard involved in placing any equipment in front of a valve that blocks the line of sight is obvious.

Access to alarms involves both seeing and hearing the alarms. Any obstruction of sight lines (e.g., with a computer monitor, signs, boxes, carts) or impairment of the alarm's audio (e.g., by taping over or plugging the speaker or sounder) can delay or prevent response.

During routine safety checks, a facility should include visual checks of the visibility, access, and condition of all zone valves and alarms.

NFPA 99 2nd Draft Report

- Revision No. 961 – Gen Set to meet maximum demand

6.7.1.2.4* Capacity and Rating.

The generator set(s) shall have the capacity and rating ~~required for effective facility operation to~~
meet the maximum demand likely to be produced by the connected load of the essential electrical
system(s) and be consistent with the ~~facility's~~ facility's emergency operations plan.

NFPA 99 2nd Draft Report

- Revision No. 1002 – Full/Empty Cylinder max temperature

11.3.4

Full and empty cylinders shall be prevented from reaching temperatures in excess of 52°C (125°F).

NFPA 99 2nd Draft Report

- Revision No. 7, 8 & 10 – Existing Signage

5.1.3.1.9

~~Locations containing central supply systems or cylinders containing~~ Source locations containing only oxygen or medical air shall have their ~~door(s)~~ doors labeled as follows:

Medical Gases

NO Smoking or Open Flame

5.1.3.1.9.1

Existing signage that is not in strict compliance with the provisions of this code shall be permitted to be continued in use as long as the authority having jurisdiction has determined that such use does not constitute a distinct hazard to life.

NFPA 101 2nd Draft Report

- Revision No. 6566 – Exit Signs Monthly Inspections

7.10.9 Testing and Maintenance.

Exit signs connected to, or provided with, a battery-operated emergency illumination source, where required in 7.10.4, shall be tested and maintained in accordance with 7.9.3.

~~7.10.0.1 Inspection.~~

~~Exit signs shall be visually inspected for operation of the illumination sources at intervals not to exceed 30 days or shall be periodically monitored in accordance with 7.0.3.1.3.~~

~~7.10.0.2 Testing.~~

~~Exit signs connected to, or provided with, a battery-operated emergency illumination source, where required in 7.10.4, shall be tested and maintained in accordance with 7.0.3.~~

NFPA 101 2nd Draft Report

- Revision No. 6555 – Required Fire Doors

8.3.3.3.1*

~~Fire~~ Required fire door assemblies shall be installed, inspected, tested, and maintained in accordance with NFPA 80.

A.8.3.3.3.1

Where a door or door frame is not required to be fire protection rated and is equipped with a fire protection listing label, the door and the door frame is not required to comply with NFPA 80.

NFPA 101 2nd Draft Report

- Revision No. 6606 & 6670 – Fire Alarm exception on 3rd shift

18.7.1.4*

Fire drills in health care occupancies shall include the simulation of emergency fire conditions and, except as indicated in 18.7.1.7, include activation of the fire alarm system notification appliances.

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Fire drills in health care occupancies shall include the simulation of emergency fire conditions and, except as indicated in 19.7.1.7, include activation of the fire alarm system notification appliances.

NFPA 101 2nd Draft Report

- Revision No. 6661 & 6671 – Soiled linen and trash receptacles

18.7.5.7 Soiled Linen and Trash Receptacles.

18.7.5.7.1*

Soiled linen or trash collection receptacles ~~shall not exceed 64 gal (242 L) in capacity and shall meet all of the following requirements:~~ with capacities greater than 64 gal (242 L) shall be located in a hazardous area when not attended.

~~The average density of container capacity in a room or space shall not exceed 1.0 gal/ft² (40.7 L/m²).~~

~~Mobile soiled linen or trash collection receptacles with capacities greater than 64 gal (242 L) shall be located in a room protected as a hazardous area when not attended.~~

~~Container size and density shall not be limited in hazardous areas.~~

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19.7.5.7.1*

Soiled linen or trash collection receptacles ~~shall not exceed 64 gal (242 L) in capacity and shall meet all of the following requirements:~~ with capacities greater than 64 gal (242 L) shall be located in a hazardous area when not attended.

~~The average density of container capacity in a room or space shall not exceed 1.0 gal/ft² (40.7 L/m²).~~

NFPA 101 2nd Draft Report

- Revision No. 2 – Detention/Correctional occupancy exception for health care facilities

6.1.7.1* Definition — Detention and Correctional Occupancy.

An occupancy, other than one whose primary intended use is health care, ambulatory health care, or residential board and care, used to lawfully incarcerate or lawfully detain one or more persons under varied degrees of restraint or security where such occupants are mostly incapable of self-preservation because of security measures not under the occupants' control.

A.6.1.7.1 Detention and Correctional Occupancy.

Detention and correctional occupancies include the following:

- (1) Adult and juvenile substance abuse centers
- (2) Adult and juvenile work camps
- (3) Adult community residential centers
- (4) Adult correctional institutions
- (5) Adult local detention facilities
- (6) Juvenile community residential centers
- (7) Juvenile detention facilities
- (8) Juvenile training schools

Detention and correctional occupancies do not include psychiatric and dementia units in hospitals, emergency rooms in hospitals, ambulatory health care occupancies, nursing homes, and residential board and care occupancies where persons can be lawfully detained.

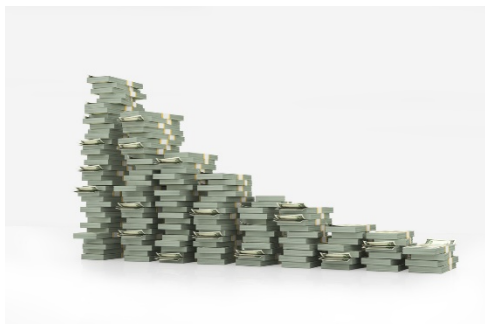
See A.22.1.1.1.6 and A.23.1.1.1.6.

Campaign 2020

- Anticipate issues for healthcare for 2021 Edition
 - Will share these with AL's as they develop
- Will need ASHE members to attend Technical Meeting
 - June 18, 2020, Orange County CC, Orlando, FL
 - NFPA Conference is 15 June - 18 June
- Voting Privileges
 - Make sure your membership stays current over the next few months!
- Anticipate need for ~300 members

Fire Extinguisher Monthly Inspections

- We need your help in submitting Public Comments !!!
- ASHE estimated that reducing the required frequency of inspection from monthly to quarterly would save the \$22 million
- More details to follow on how to submit an NFPA Public Comment on this specific issue



Fire Extinguisher Monthly Inspections

- 2 Public Inputs were submitted last year to reduce the frequency of monthly inspections
 - Inputs were rejected
- Standard is currently in the Public Comment stage
 - Comment period closes May 6, 2020
 - A Committee Input was created to allow a performance-based approach for monthly inspections to solicit Public Comments on the topic



Energy Targets



Stringent Energy Targets Could Cost You

Proposed fees and penalties related to energy efficiency in hospitals are currently being adopted by state and local jurisdictions. The state of Washington recently passed legislation which places a penalty of up to \$5,000 plus \$1 per gross square foot of floor area per year for buildings that do not comply with energy targets. Non-compliant buildings are required to complete an Energy Audit identifying Energy Efficiency Measures and to implement Energy Efficiency Measures to bring the building into compliance. However, the energy targets that the legislation is developed from may not be realistic or attainable.

To help calculate correct targets, we need every hospital in the U.S. to benchmark their energy data in the [Energy to Care program](#). Up-to-date energy data will provide ASHE with statistically significant data that can be used to advocate for correct energy targets and prevent undue financial burdens on hospitals.

ANSI/ASHRAE/IES Standard 100-2018 provides energy management criteria geared toward a reduction of energy consumption in existing buildings and is being utilized as an initial model for legislation development. The median Hospital/Inpatient EUI target in the standard is 139 kBtu/ft²yr. The ENERGY STAR® Portfolio Manager Technical Reference provides a median EUI for General Medical and Surgical Hospitals of 234.3 kBtu/ft²yr. ASHE's [Energy to Care Program](#) data reflects a median EUI of 163 kBtu/ft²yr for hospitals with ENERGY STAR® scores between 90 and 100, suggesting that the target EUIs identified in the standard are not attainable for the vast majority of hospitals.

ASHE is launching a workshop in which subject matter experts will provide hands-on training to upload energy data into the Energy to Care dashboard and to utilize the program resources for obtaining energy management goals. Contact energytocare@aha.org to request more information.











VISIT ENERGY TO CARE

What does this mean for you?

- We need up to date energy data for as many hospitals as possible.
- Work with chapter membership to set up Energy to Care Dashboards for hospitals.
- Encourage members to keep data up to date.

Training Videos Available

- <https://www.energytocare.org/dashboard>

TRAINING VIDEOS	
	New Organization Administrator Setup
	How to Run a Report
	Creating a New Account
	Interpreting Utility Portfolio
	Adding a Building
	Interpreting Utility Gap
	New Building Administrator Approval
	Interpreting Homepage Widgets
	Requesting Access to a Building
	Uploading Data

Energy to Care Workshops

ASHE is offering Energy to Care workshops to help participants get enrolled.

Three types of workshops offered:

- 1 – hour online workshop
- 2 – hour online workshop
- 4 – hour in person workshop

Learning Objectives – 1 hour training

- Name and describe the core ASHE Energy to Care product offerings.
- Access and sign into the Energy to Care Dashboard.
- Understand the setup process for new users, buildings, and organizations.
- List and describe user roles and responsibilities.
- Understand how utility data can be managed and shared between ENERGY STAR Portfolio Manager and the Energy to Care Dashboard.
- Locate dashboard resources including the how-to guide and tutorial videos.
- Navigate through the dashboard's homescreen views and drop-down menu options.

Learning Objectives – 2 hour training

- Name and describe the core ASHE Energy to Care product offerings.
- Access and sign into the Energy to Care Dashboard.
- Understand the setup process for new users, buildings, and organizations.
- List and describe user roles and responsibilities.
- Locate dashboard resources including the how-to guide and tutorial videos.
- Understand how utility data can be managed and shared between ENERGY STAR Portfolio Manager and the Energy to Care Dashboard.
- Navigate through the dashboard's homescreen views and drop-down menu options.
- Upload utility data into the dashboard.
- Interpret and analyze utility performance data using the dashboard views, tools, and reports.

Learning Objectives – 4 hour training

- Name and describe the core ASHE Energy to Care product offerings.
- Access and sign into the Energy to Care Dashboard.
- Understand the setup process for new users, buildings, and organizations.
- List and describe user roles and responsibilities.
- Understand how manage changes in users, buildings, and utility data.
- Locate dashboard resources including the how-to guide and tutorial videos.
- Understand how utility data can be managed and shared between ENERGY STAR Portfolio Manager and the Energy to Care Dashboard.
- Navigate through the dashboard's homescreen views and drop-down menu options.
- Upload utility data into the dashboard.
- Interpret and analyze utility performance data using the dashboard views, tools, and reports.
- Generate recurring reports based on user preferences.
- Field questions and answers from the audience regarding setup, navigation, and troubleshooting.

More information

- ASHE is offering the 1st (6) in person workshops as a pro-bono effort.
- For an application for a pro-bono workshop, please contact energytocare@aha.org to request an application
- For information on all workshops, please contact energytocare@aha.org.
- Please contact Melissa for cost information, mheim@aha.org

ASHRAE Update

ASHRAE Winter Meetings

- ASHRAE 170 Ventilation for HC Facilities
 - Worked on several addenda and formal interpretations
 - Will be formally issued via ASHRAE
- ASHRAE 189.3 Design, Construction and Operation of Sustainable High-Performance Health Care Facilities
 - Finalized alignment with 189.1
- ASHRAE 100
 - Met with committee chair and committee to discuss action plan for improving energy use targets

ASHRAE 170

- Currently no open addenda for public comments
- Will be coming soon

- Watch for notices within



CODES & STANDARDS

Health care ventilation standard open for public comment

A proposed addendum to Standard 170-2017, Ventilation of Health Care Facilities, is open for public comment.

HFM

ENERGY TO CARE AWARDS AND THE CHAPTER CHALLENGE

Energy to Care Awards

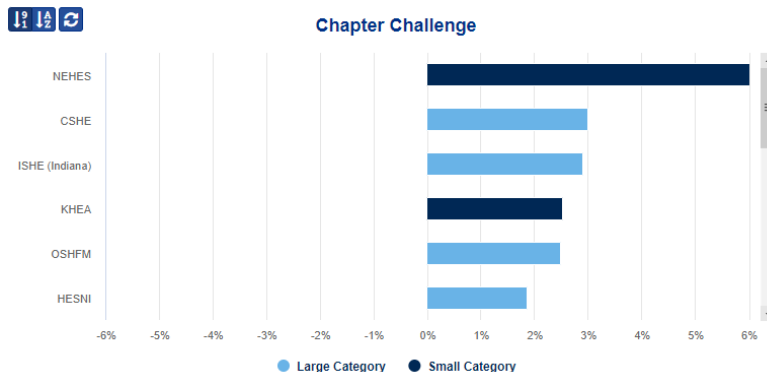
- Energy Champion Award Applications on website.
- All Dashboard participants are eligible to receive an Energy to Care Award.
- Make sure all Energy Data is up to Date.
- We will notify winners after April , 2020.
- Track eligibility on Dashboard home page.



Awards Progress
Period Ending December 2018



New Process for the Challenge



- To be eligible to compete, the facilities must have complete energy data entered in Energy to Care for the year (4/1/20 thru 3/31/21).
- All energy data must be entered into the Energy to Care platform no later than June 30, 2020.
- Energy to Care participants can view their chapter rank on the Energy to Care Dashboard. Data will be updated on or around the 1st of each month.
- The Challenge will compare weather-normalized Source EUI between two, 12-month period, ending dates 3/31/19 and 3/31/20. The chapter that demonstrates the greatest percent-based reduction in weather normalized EUI across the two periods will be the winner.
- Commitment Forms are due April 1, 2020, these can be found on the website

FGI, USP & ICC Update

- Document and topic groups review/vote on proposals completed.
- Draft manuscripts are being developed and will be presented at the HGRC meeting scheduled for March 31 through April 3, 2020
- Once the draft manuscripts are finalized a comment period will open for public input beginning June 1, 2020 and closing August 31, 2020.

USP

- Appeals panel met
- Awaiting final determination
 - (1) deny the appeals, resulting in the standards approved by the Expert Committee becoming official
 - (2) grant one or more of the appeals, resulting in a remand of the standards to the responsible Expert Committee for further evaluation or engagement
- The Joint Commission
 - During the appeals process of the United States Pharmacopeia (USP) 797 chapter revisions, The Joint Commission will evaluate organizations based on the version they have adopted.

ICC

- No current actions
- ICC CHC Meeting to prepare for 2024 Cycle – Group A
 - To be held following ASHE PDC
 - March 25th – 26th
 - Open to public and interested parties

Energy to Care Treasure Hunts

PDC Treasure Hunt

- We had to cancel the post conference Treasure Hunt for the PDC Conference due to the lack of a host facility.
- We are working to find a host facility for the Annual Conference Treasure Hunt



2020 Webinar Dates

2020 Sustainability and Advocacy Liaison Dates



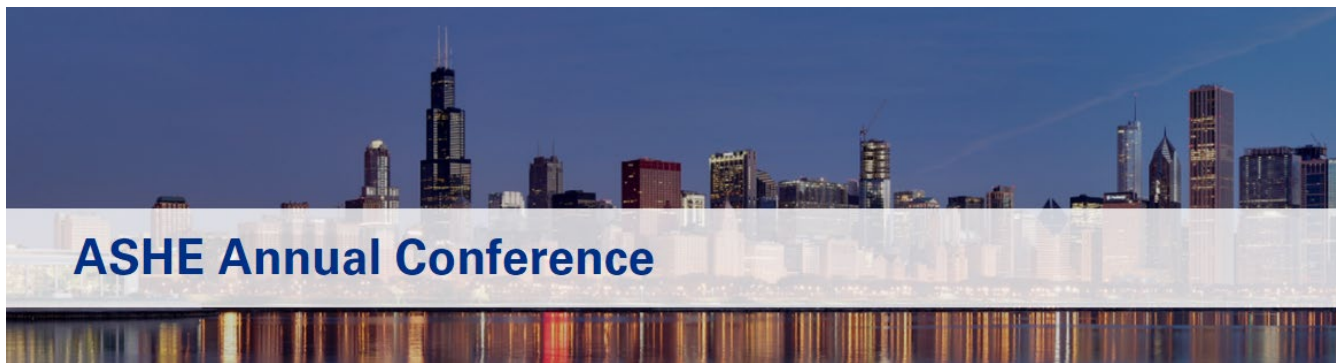
Webinar Reminders will be posted on myASHE Sustainability Liaison Community

- Q2 – Wednesday, May 20, 2020
- Q3 – Liaison Day - October 29 - 30, 2020
- Q4 – Wednesday, December 9, 2020

All webinars will begin at 12:00 Noon CT

Upcoming Events

Upcoming Events!



August 2-5, 2020 Chicago, IL



Thank you!

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