Ron Vachon Named Engineer of the Year

Ron Vachon, Facilities Director at St. Mary’s Regional Medical Center in Lewiston, Maine was honored as the Engineer of the Year recently at the New England Healthcare Engineers’ Society Fall Conference in Mystic, Connecticut.

The Engineer of the Year Award recognizes a member’s contributions beyond their normal duties to their local state chapter, to NEHES, and to the facilities management profession.

While he has been an integral part of many initiatives, those that nominated him as Engineer of the Year made special note of his dedicated work to the development and expansion of the NEHES quarterly newsletter and the NEHES website.

Jim Carroll Receives Chapter Leadership Award

Jim Carroll, Director of Facilities at Butler Hospital, was honored at the NEHES Fall Conference as a recipient of the Chapter Leadership Award. He received the award for his outstanding work in revitalizing the Rhode Island Healthcare Engineers Society Chapter. Carroll has served as a NEHES Board Member and a Chapter Representative for the New Hampshire Healthcare Engineers’ Society.

In addition to receiving a commemorative plaque, Carroll will receive free conference admission to the NEHES 2015 conferences.

The awardee also receives a stipend toward the cost of the 2015 ASHE national conference and consideration as a candidate for the ASHE Emerging Regional Leadership award.

John Crowley Receives President’s Award

John Crowley is an institution in NEHES having served twice as the Society’s president. For this and many other achievements, Crowley was honored with the coveted President’s Award at the NEHES Fall Conference. Crowley was honored for his professionalism and dedication during his many years as a NEHES member. Established in 2011 by then NEHES President, Dave Dagenais, the President’s Award goes to the person deemed by the sitting president to have a long history of service to NEHES.


Take a look at Crowley receiving the award and colleague, Ralph Pelosi adding his comments about Crowley.
Education Sessions Drive NEHES Conference—

- The first day of the conference featured a CHFM review course leading up to taking the CHFM test.
- With a wide range of individual speakers and panel discussions, the conference covered a variety of subjects. Whether learning about the importance of culture in an organization or hearing how one NEHES member created a new program in his hospital, members gained solid and useful information.
- Interactive problem solving was engaging and challenging as members worked together for solutions.
- Each NEHES member received a special cooler pack as a welcoming gift. NEHES members were able to receive a free signed copy of keynote speaker, S. Chris Edmonds’ new book, “The Culture Engine.”
Keynote Speaker, S. Chris Edmonds was particularly excited when the NEHES Conference kicked off in Mystic, CT. You see, Edmonds new book, “The Culture Engine” was being launched that day and he eagerly followed the status of sales on Amazon.com.

“We are more aware now than ever before of the vital importance of organizational culture. No one is inspired to perform in dreary, frustrating environments, and, in the 21st century, inspiration and engagement are often the only things separating the successes from the failures,” said Edmonds. “But an earnest desire to improve your organization’s culture will only get you so far. You need a tangible framework that will give shape to your good intentions.”

Why does culture matter? Edmonds cites the challenge.

- Only 40% of employees are engaged at work.
- Only 45% are “satisfied” at work.
- Disengaged employees cost American companies $350 Billion in lost productivity each year.
- Engaged companies have 6% higher profits than disengaged companies.

Edmonds believes that “values” make the difference in an organization.

- Values alignment boosts production, engagement, and service.
- Leaders must “be bold” and implement proven practices like cooperation, delegation, inspiration, and more.
- By emphasizing values, leaders create work environments of trust, respect, and dignity.

Edmonds suggests that every organization create an organizational constitution to work by. It must be straightforward so that everyone understands it. Leaders, and employees alike, must agree to the concepts outlined in the document.

Basics for a Constitution:

- There are four elements: purpose, values and behaviors, strategies, and goals.
- Create clear agreements for performance and for values.
- “Liberating rules” allow people to relax, be present, produce, and work together.

With this vision in place, employees feel engaged and inspired to be a part of something with tangible meaning. A culture like that is the holy grail of leadership.

By defining, crafting, and managing an organizational constitution, Edmonds believes that the goal is within reach for any organization.

Edmonds works for the Ken Blanchard Companies and will be the instructor for the NEHES Leadership series being launched in 2015.
NEHES Fall Conference Finds Port in Mystic, Connecticut
Networking, Learning and Recognition

(At left) CHFM Preparation Course—The Conference offered a CHFM Course Review by Past ASHE President, Leo Gehring. There were 35 participants in the class, many preparing to take the exam three days later.

(At right) Business at Breakfast—Members start the day in style before a day full of learning opportunities.

(At left) Making Connections—Social time allows an opportunity for NEHES members to connect and reconnect with colleagues. President’s Award winner, John Crowley holds court at center.

(At right) State Banners EHES—As the Connecticut Chapter hosted the Fall Conference, it was the chance to roll out new state banners.

(At left) Thank You to NEHES Staff—Ed Lydon (at left) thanks NEHES staff, Michele Deane and Jack Gosselin for their work to craft the Fall Conference. A Little Laughter Goes A Long Way—Sharing a lighter moment are Jona Roberts, Ron Vachon and Ann Kroger.

(At left) Passing the Gavel—NEHES President, Ed Lydon passes the gavel to the new NEHES President, Paul Cantrell. The gavel has been with NEHES since 1958.

(At right) Best Article of the Year—Ed Browne (at right) received recognition for the best article of the year submitted to our newsletter.

To see a photo gallery from the NEHES Fall Conference, go to the https://www.flickr.com/photos/127435366@N08/sets You can also see photos at the NEHES Facebook page
Supporting Members Make Connections
Vendor Displays and First Time Gala Highlight Fall Conference

**Conference Highlights**—NEHES members enjoyed the opportunity of visiting with dozens of Supporting Members in the Exhibition Hall at the Fall Conference.

Members welcomed the opportunity to learn about services and products of interest to NEHES members. There were even two colleges in attendance offering programs of study for healthcare facility engineers. Champlain College from Burlington, Vermont was represented as well as Owensboro Community and Technical College at Owensboro, Kentucky. NEHES member, Mark Robinson from Tufts Medical Center is a student enrolled in the Owensboro program.

**Mystic Aquarium Gala**—As a special change of pace, the NEHES Fall Conference was the scene of a first ever gala held at the Mystic Aquarium in Mystic, CT. NEHES members walked through the aquarium exhibits while dining, socializing, listening to a live band, and visiting with a lively penguin or two.
Annual Meeting Recap

President, Ed Lydon called the meeting to order by outlining the accomplishments for the year. (View the list under Ed’s message on Page 7.)

The President-Elect’s Report was given by Paul Cantrell. He outlined his slate of goals for 2015.
- Develop new strategic plan for the society’s future with assistance of consultant.
- Greater collaboration with supporting members for improved conferences.
- Further enhance website development.
- Continue financial responsibility for the organization.
- Identify support needs of the State Chapters
- Enhance NEHES marketing
- Enhance Membership
- Promote Leadership Educational Series
- Continue refinement of seminar and conference planning guidelines
- Foster interest among Active members to serve on the NEHES Board of Directors.

Treasurer’s Report—The Treasurer’s Report was given by Alison Brisson. Brisson noted that $79,600 of benefits were returned to the membership. These benefits included
- Free Active Membership in 2014.
- Advocacy support on the local, state and national levels.
- State Chapter Support.
- Conference Scholarships.
- Web-site Development and Maintenance.
- Quarterly Newsletter (online and print editions) and Publications.

New Business-
- Nominations and Election of Officers for 2015 (See officers on Page 1)
- Confirmation of Annual Dues Annual Dues in 2015 will be:
  - $35.00 Active Members
  - $100.00 Supporting Members
  - $10.00 Educator and Student Members
  - Honorary Members are free.

State Chapter Reports were given by:
- Connecticut – Paul Roth
- New Hampshire – Peter Girard
- Maine – Chris Henderson
- Rhode Island – Jim Carroll
- Massachusetts – Larry Williams
- Vermont – Mark Blanchard

Committee Chair, Liaison and Other Reports were given.

Recognition Ceremony gave awards to the following for their service:
- Mark Blanchard
- Alison Brisson
- Paul Cantrell
- James Carroll
- John Crowley
- Dave Dagenais
- Milt Dudley
- John Duraes
- Peter Girard
- Randy Hussey
- Steve Jalowiec
- Mike Walsh
- Wes Pooler
- Kevin Keating
- Ed Lydon
- Tyson Moulton
- Ed Lydon
- Jon Roberts
- David Rosinski
- Paul Roth
- Bill Smith
- Ron Vachon
- Gary Valcourt
- Mike Walsh

State Chapters Recognized—Jona Roberts honored four chapters with the Chapter Leadership Award. Those states receiving recognition (from left to right) Vermont, Massachusetts, Maine and New Hampshire.
President’s Message—Ed Lydon

Ed Lydon, SASHE, CHFM, Assistant Vice President for Support Services
2014 NEHES President

I want to thank the Board of Directors, Committee Members, the gracious Supporting Members, Active Membership, and the wisdom of many Past Presidents for making my year as NEHES President a successful one. I could not have done it without your support and commitment.

I also offer my thanks to the executive team Paul Cantrell, Jona Roberts, Alison Brisson and Gary Valcourt for their dedication to work collaboratively to advance our Society. Here are some of our accomplishments.

- We continue to have governance that is in alignment with the growth of NEHES. Today’s NEHES organization is very complex and benefits from a volunteer board that is willing to put in the time needed to move things forward. We have solid dedication and commitment to work on various initiatives.
- We have further developed and expanded the responsibilities of the Administrative Director. We continue to refine the duties of the AD’s office to better serve the membership. You will find full time access to information and resources through the AD office as well as support in putting together all our events, seminars, and conferences.
- Enhanced NEHES marketing strategies. This year, we developed a NEHES booth display and banners for each state chapter. We expanded our reach to members through social media websites such as Facebook, LinkedIn, and Twitter. You can also find a NEHES YouTube channel with video clips about our activities.
- We have made substantial investments in enhancing the NEHES website. With a new design and improved functionality, we position our website as “the source” of info for NEHES members. It is also a vital link to online registrations for membership, sponsorship and our events.
- Developed a closer relationship with our Supporting Members. – Mike Walsh was appointed as a Supporting Member Liaison and attended all board meetings on their behalf. We also hosted a series of town meetings throughout New England and were able to get valuable feedback about how NEHES can best serve their needs. We have started to implement improvements based on the feedback received.
- Promoted membership at all levels. We continue to encourage members to participate at the state, New England, and national levels to advance our profession. Personally, I am honored to have been chosen as your ASHE Region 1 representative on the national level. Lastly, I want to tell the membership how apparent it is to me that the 2015 NEHES Board has the ingredients of leadership, fresh ideas, and a strong willingness to continue the quality in services NEHES has grown to deliver. This coming year will continue to see improvements and advancements for NEHES under the guidance of incoming President, Paul Cantrell.

Cheers to the society as we start our 57th year of service to our profession!

President-Elect’s Message—Paul Cantrell

Paul Cantrell, CE, CPE, CHFM
Director of Facility Operations
2014 NEHES President–Elect
(Why the motorcycle photo? See Page 16!)

I want to take a moment to thank Ed Lydon for his service as the NEHES President. His dedication is outstanding and his leadership has developed our organization in so many ways. Ed brings a unique skill set to the organization and his attention to detail prevailed throughout his term. I certainly want to thank him for his tutelage. Ed had a genuine desire to launch this organization to the next step. It has been rewarding to be on this executive team in helping along the way.

Here are my goals for 2015.

- Develop new strategic plan for the society’s future with assistance of consultant. This has already been done at our Fall Retreat. See page 8 for highlights of the plan.
- Greater collaboration with Supporting Members for improved conferences. We have done work in this area but need to continue our efforts to make our conferences beneficial, particularly, for our Supporting Members.
- Further enhance website development. We will advance the great efforts that have taken place this year into 2015.
- Continue financial responsibility for the organization. As stewards of NEHES funds, we will continue to keep an eye on our financial future.
- Identify support needs of the State Chapters. We will look at the varied ways that we can help strengthen the growth and development of our State Chapters.
- Enhance NEHES marketing. We will find new and improved ways to market NEHES to members and non-members, alike.
- Enhance Membership—Are there things that we can offer that will enhance the value of NEHES membership? We will consider all improvements.
- Promote Leadership Education Series. See info on Page 13.
- Continue refinement of seminar and conferences planning. We will continue to streamline the planning and implementation of our seminars and conferences.
- Foster interest among Active Members to serve on the NEHES Board of Directors.

Drop a line if you have any comments or suggestions on ways we can improve NEHES in 2015. pcantrell@crhc.org
NEHES President, Paul Cantrell is pleased to announce the following appointments for 2015.

**Scholarship/Education/Career Development**— Milt Dudley

**Membership**— Bill Smith

**Website/Newsletter**— Anand Seth and Ron Vachon

**Steering/By-Laws**— Kevin Keating

**Liaisons**
- **ASHE**— Ed Lydon
- **Supporting Member Liaison**— Mike Walsh
- **Advocacy/Accreditation**— Randy Hussey

**Special Appointments**
- **Parliamentarian**— John Crowley
- **Finance**— Gary Valcourt
- **Marketing**— Ed Browne/Dave Rosinski
- **Recognition**— Jona Roberts
- **Affiliation Levels**— Admin Director
- **Website**— Anand Seth

**Chapter Representatives:**
- **Vermont:** Mark Blanchard
- **New Hampshire:** Peter Girard
- **Maine:** Daniel Bickford
- **Massachusetts:** Larry Williams
- **Rhode Island:** Jim Carroll
- **Connecticut:** Paul Roth

**Audit Committee**
- Kevin Keating, Chair
- Paul Cantrell, Jona Roberts, Alison Brisson

**Spring Seminar**— Larry Williams & Massachusetts Chapter

**Fall Conference**— Jim Carroll & Rhode Island Chapter

**2015 ASHE Conference**
- Ed Lydon, John Duraes, Gary Valcourt
- Mike Walsh, and Alison Brisson

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**NEHES Board Retreat 2014—Charting NEHES On Course**

Members of the NEHES Board were invited to a planning retreat in Newport, Rhode Island on November 7 & 8 by Incoming NEHES President, Paul Cantrell. A retreat is held annually to help review the year’s work plan and to chart a course for the coming year.

On one day of the retreat, Barry MacKechine, owner of CEO Service, a national consulting firm, assisted us in our planning. MacKechnie helped us create a similar plan four years ago and is uniquely knowledgeable about us.

Key areas considered were:

**Membership**
- The group agreed to set membership goals for 2015 to 2018 for Active and Supporting Members. A plan will be implemented to track retention statistics of new members, renewing members and lost members.
- **Satisfaction Survey**
  - It was agreed that all members will be surveyed regarding their satisfaction as a NEHES member.
- **Potential Members**
  - NEHES will explore potential sources for new members including facility engineers at nursing homes and assisted living facilities. We will continue to grow our Supporting Member network.
- **Value of NEHES Membership**
  - NEHES will continue promoting the value of NEHES membership by actually quantifying the dollar value for membership.
  - NEHES membership has exceptional value through benefits such as:
    - Educational opportunities.
    - Website/Newsletter resources.
    - Access to ASHE programs.
    - Scholarship program.
    - Internship program.
    - CHFM review and testing.
    - Free publications
    - Life Safety training
    - Networking with peers
    - Access to vendors and services
    - Leadership program new in 2015
- **Increase the promotional power of the NEHES website**
  - Expand social media presence. Consider targeted blog postings, more feeds to LinkedIn and Facebook. Look into opportunities for sponsorships and ads.
  - Continue to promote the mission and value of NEHES membership.
  - Continue to improve the functionality and resourcefulness of the website.
  - Build on our website optimization for web searching engines.
  - Develop channels for member testimonials.
- **NEHES Board Development**
  - Identify future board members and committee chairs through a detailed nomination process.
  - Provide orientation to board participation.
  - Encourage board participation to general membership.

**DID YOU KNOW?**
- NEHES currently has 277 Active Members and 234 Supporting Members.
- One of the goals for NEHES in 1960 was to reach 100 members.
New and Renewing NEHES Members—Welcome Aboard!

Massachusetts

Kader Belaid
President
Gaugebook
Melrose, MA

Bill Collins
Vice President
Rypos
Holliston, MA

Dominic Gagnon
Manager, Planning and Design
Baystate Health
Springfield, MA

Monica Hanley
Business Development Executive
DiGiorgio Associates Inc.
Monitor Builders
Boston, MA

Michael McGrath
Power and Energy Solutions Specialist

Zeller
Foxboro, MA

Robert H. Lord Company
Manchester, CT

Vermont

John Endres
Director of Environmental Services
The Vermont Veterans’ Home
Bennington, VT

Erik Lahr
Facilities Operations Supervisor
Fletcher Allen Healthcare
Colchester, VT

New Hampshire

Domenic Ciavarro
Vice President, Facilities
Concord Hospital
New Hampshire

Scott Lever
Utilities Manager
Southern New Hampshire Medical Center
Nashua, NH

Maine

Charles Fogg
Director of Business Operations
Northeast Firestopping Solutions
Saco, ME

Carol Gillis
AIA
Harriman
Auburn, ME

New York

Gil DiMaio
Vice President
The PIKE Company
Rochester, NY

Leo E. Ostberg
Business Development Manager
The PIKE Company
Rochester, NY

The cost of joining NEHES in 2015 will be $35 for Active Members, $100 for Supporting Members and $10 for Students/Educators. The return on that investment is estimated at over $1700 in benefits per year! How? Consider the following.

- **Educational programs are the backbone of NEHES.** With a single day spring seminar and a multi-day fall conference offered to its members, NEHES sets a standard of excellence for quality educational programs with local, regional and nationally acclaimed speakers. CHFM Review Courses are offered at no charge and CEUs are offered for all programming.

- **A quarterly newsletter** with important information about upcoming events and NEHES programming. It is also a resource to share information among NEHES members. Members can receive an online edition as well as a printed edition.

- The **NEHES website** is a source of information for the New England society as well as for individual state chapters. This year, we added a state chapter link to the NEHES homepage.

- We provide current information on codes and standards. Each of us lives by these items and NEHES is a vital source of updated information. Oftentimes, new guideline books are given out free as part of attendance at one of our conferences. Life safety training is offered at no cost to NEHES members.

- **NEHES members receive advocacy support locally and nationally.** When new or updated regulations are being proposed, you have someone in your corner willing to advocate for meaningful and reasonable changes in codes and standards. You have a voice in the decision making process!

- **NEHES supports its state chapters** as they recruit members and offer their own statewide programming. In fact, the Twin State Seminar is offered at no cost to members whatsoever. NEHES stands ready to support special financial needs of state chapters.

- **NEHES Scholarships help members reach their educational goals.** With individual scholarships up to $2000 per year, every NEHES Active Member has the opportunity to advance their career studies.

- **Supporting Members have the opportunity to meet one-on-one with potential customers** in need of their products and services. Vendor exhibit space is offered at two major events each year specifically for Supporting Members.

- **Networking for solutions!** If you have a question or concern about a project, you have the combined knowledge of over 500 members to solicit information from. This, alone, can save you time and dollars.

We all like to have a good return on investment for our personal funds. You can feel confident to know that the investment in a NEHES membership is — as many would say, — priceless!
Smoke and Fire Damper Inspections

Tips and Techniques

By Aedan Gleeson
President
Gleeson Powers, Inc.,
Gleesonpowers.com

As facility managers, it’s no secret that your fire and smoke dampers need to be regularly inspected. According to NFPA 80 19.4, NFPA 105 6.5 and UL 555, all dampers must be tested upon installation, one year after installation, and every four years thereafter (with the exception of hospitals, which is every six years).

This is not the kind of task you can do once and then forget about. It requires a systematic and proactive approach to managing the inspections process, so that it can be a low-cost, low-stress, project as opposed to an expensive, overwhelming and disruptive project every four (or six) years. We have a few suggestions of best practices to help manage your facility’s fire and smoke damper inspections.

• Scheduling

Scheduling plays a huge role in getting the inspection process under control. Organize your dampers into sections, and schedule out over a four or six year span depending on what is required for your facility. Instead of inspecting 150 dampers every six years -- requiring a substantial time and monetary commitment -- inspect 25 dampers per year over the next six years. Twenty-five dampers in one year is much more manageable than 150 dampers. When scheduling, we find the most efficient way to group dampers is by location, but you may find that grouping by type of damper, year installed, or available drawings works best for your facility. Tackling dampers a few at a time changes the nature of the project from a marathon to a sprint, resulting in better long term management.

• Project set up

Spending the time to properly set up the project is another time and money saver. Once you have identified which dampers you will be inspecting, print out life safety plans with damper locations by floor. Life safety drawings -- indeed, current life safety drawings -- are essential. Highlight relevant locations so it is easy to find dampers at the time of inspection. Use different highlighter colors for each damper type – this provides a quick reference for how many of each damper type are per floor, and will come in handy throughout the project. Print out blank damper data entry templates (more to come on this in the documentation section). Gather all equipment and materials together for the inspection so you don’t waste time – some key items include:

- Ladders
- Lights
- Vacuum
- Small hand tools (pliers, screwdrivers etc. for removing grilles in front of dampers or opening up an access panel)
- Cleaning cloths
- Camera (for documentation)
- Damper links (you will need various types and temperatures as you usually don’t know the temps/types until you complete a few floors)
- Magnet for testing fire/smoke dampers and smoke dampers that have the magnetic testing switch
- Silicon lubricant (for lubricating the bearings/linkage)
- Heat gun and extension cord (for testing heat disks on fire/smoke dampers)

• Inspection process

Decide which areas to start with; schedule any patient rooms or office areas up front – it can take time to coordinate and gain access to these areas. Determine what areas will be weekend work, and note those areas on the appropriate floors plans. Particularly in hospital settings, gather a list of important contacts per floor (e.g. nurse manager) – they can be great resources for expediting patient room scheduling and can contact you directly when a room becomes available for testing.

Perform inspections one floor or building at a time, depending on the size of the project and crew. This way, once you leave a floor or building, you know you are 100% complete with the exception of patient rooms and/or offices. Have a two-person team – one to perform the inspection and the other to document. Be sure to note operational testing as well as anything important about the installation, location and/or access that will impact future inspections.

For example, the damper may pass inspection but be hanging out of the wall (installation issue); or, you may not be able to get to the damper due to a small access panel. Keeping track of this information will not only provide important document for the current inspection, but will be a huge help for the next time around.

Have regularly scheduled meetings to discuss and address major issues and/or repair work – these should be daily or weekly depending on the size of the inspection project.

• Documentation

Documentation is key to reducing time, energy and costs on damper inspections. Documentation showing that dampers have been inspected and are functioning must be available for review by facility managers, C-suite leadership and/or CMS, TJIC, DNV, HFAP or other AHJs. To expedite this process, develop a “bubble sheet” – a data entry template that records damper ID, type, manufacturer, inspection status, installation issues, inspector’s name, work order information and verification of tasks performed. The more information, the better – it will make your life easier in the immediate future, for future compliance surveys, and for the next time you inspect the damper. Enter all data and photos on a weekly basis so there is no more than one week of backlog.

An excel spreadsheet or PDF report is not enough. It goes on a CD and sits on a shelf, and you end up starting from scratch the next time the inspection is performed. We recommend a living database, so you can access the current status of your dampers at any time, and see a history of inspections and repairs over a damper’s lifetime. We use the Life Safety Tracker System®, which also allows you to see a marked up floor plan with all dampers, their statuses, and quick access to photos, inspection and installation notes.

• Project close out

Lastly, it’s important to formally close out the project. Ideally, there should be a final report or presentation to your team or to senior leadership. This is good practice and helps ensures that all loose ends are tied up before moving on the next project. It will also help prepare you for when The Joint Commission, DNV, HFAP, CMS or other AHJ asks you for an update on the condition of your fire dampers – you can quickly pull up the project close out documents (or log into your software) and clearly demonstrate you are on top of your facility’s dampers.
Healthcare facility managers are being required to manage more buildings with less staff and budget than ever before. With many buildings to oversee, and less personnel available to stay current, it has become critical to develop organized methods for tracking past, current, and future building repairs. Facility managers are required to keep careful track of detailed repair histories and recommended repairs, while managing current and projected costs. A formal roof management plan (RMP) can assist in the day-to-day operations and long-term planning.

The purpose of a well-defined RMP is to establish current and long-term budgeting for roof repairs/replacement. Facility managers of hospitals are often expected to estimate the type, and more importantly, the cost of necessary repairs not only for the next year, but often for the next five to ten years. They seldom have the resources necessary to evaluate their roofs on a yearly basis and are forced to make educated guesses regarding the types of repair or replacements needed, based on the roofs’ history and age.

Estimating roof repair and replacement costs using warranties and expected roof service life can be ineffective since roofs fail for various reasons including the material/system designed and installed, amount of traffic or mechanical equipment maintenance on the roof, and weather conditions. It is not realistic to assume that a five-year-old roof will not require maintenance or repairs for another fifteen years. The best way to track and predict roof system performance is with a well-organized RMP consisting of:

- **Building histories** are used as a background for the report and include the name, use, and age of the building; type of roof system; and repair history. Knowing the roof’s history is invaluable in understanding its current condition and in anticipating potential repairs/replacement needs.
- **Destructive testing (roof cuts)** will verify trapped moisture and confirm the as-built construction. Test cuts can be helpful in validating energy code requirements based on insulation type and thickness.

Not all of the above steps are critical to determine the conditions of various roof systems. Based on the size and complexity of a roof, a simple visual evaluation may be all that is necessary. It also depends on the particular needs of the healthcare facility and manager.

### Determining Priorities

Once the field evaluations (and testing) have been performed, a priority list of recommendations is developed. Facility managers responsible for large hospital campuses most likely cannot perform all recommendations in one year. The intent of a roof management plan is to determine which roofs are the priorities. For example, if a hospital has two roofs that leak and are in equally poor condition, the roof above Patient Care would be a priority over less critical areas.

### Developing the Report

The condition of each roof is summarized and could be placed in a three-ring binder to allow the information to be easily updated. Healthcare campus plans and photographs of various defect conditions are included. Spreadsheets that display priority repair/replacement recommendations for budgeting purposes, as well as a budget matrix are also included in the RMP. This allows the healthcare facility and manager to have an easy reference guide which can be reviewed when planning fiscal budgets.
Maine Medical Center has recently started the Bean 2 addition on the Bramhall Campus, an 18,500 square feet vertical expansion that will include five state-of-the-art neuro-operating rooms, twenty recovery bays and associated support spaces, as well as a new mechanical penthouse.

The project is the first step in the Facilities Master Plan and, as with any vertical expansion project, the design and construction of the space presented unique challenges. In particular, maintaining the Emergency Department entrance/ ambulance drop off, the Helipad, and the fully operational skilled care units immediately below the construction area is required throughout construction.

Complex planning and phasing was required to maintain operations during construction, particularly while enhancing the existing structural system throughout the building to accommodate the vertical addition and modifying/ expanding the aging mechanical/ electrical infrastructure to support the new program.

Daily and weekly meetings occur to address infectious control considerations, interim life safety plans, daily noise notifications, communications relative to crane impacts to the Med-flight helicopters, and coordinate access to the exterior wall facing the ED, including careful management of crane set up and rigging around the ambulance drop offs.

The use of pagers and 20-minute notice for helicopter drops facilitates a process in which the crane operator must complete a pick and retract the jib to clear the flight path for the helicopter to land on the pad upon the construction supervisor and crane operator receiving notification via pager. Furthermore, the construction team has worked with the hospital operations personnel to locate a crane within the ED drop off area on weekends to set the curtain wall framing and glass on the adjacent wall of the addition.

A detailed schedule was accomplished with multiple infectious control plans to complete all of the new under slab piping for the addition which ran within ceiling space of the special care units (SCU). The existing roof was maintained in place with steel penetrations waterproofed until the addition was weather-tight to avoid any water leaks into the occupied SCUs below.

Detailed planning and communications between the construction team and the hospital employees has been essential to keep the project moving while minimizing impact to the hospital’s critical operations.

The structural design and construction challenges for the vertical expansion were immense considering the construction occurred over existing occupied medical space immediately adjacent to a functioning emergency department entrance. Due to the below grade electrical vault that limited the opportunity to extend structure to new foundations, the east portion of the addition is cantilevered eight feet beyond the existing structure below. Strengthening of six existing steel columns was required to provide the frame for the new addition above.

Minimizing the overall weight of the new structure is critical due to the constraints of the existing structure and foundation capabilities. Careful consideration was given to the building envelope to limit the loads on structure below.

Strategic use of interior glazing borrows light and view to areas that have an intervening space at the perimeter, including a sub-sterile room at the end of a corridor which has both exterior windows and an interior glazed wall that allows light through to the corridor. Clerestory windows in the prep/recovery area maintain patient privacy while allowing the essence of daylight to travel through the space.

The HVAC system is a single duct VAV system with hot water reheat and perimeter radiant and baseboard heating. The hot water, steam, and chilled water for the project were provided from the hospital’s central energy plant. A new mechanical penthouse, which is located directly above the Bean 2 space, has been designed to house three new custom air handling units.

In lieu of trim humidifiers for the OR’s, OR humidification is provided from the primary air handling unit, which resulted in a cost savings for the owner. For ease of maintenance and to minimize infection control concerns, the VAV supply and return boxes are located within the penthouse mechanical room. There is no mechanical equipment located on the flat roof above the penthouse, and one well was provided in the mechanical mezzanine to house relocated equipment that was on the Bean 1 roof prior to the addition. A glycol snow melt system is planned for the well, as well as for the intake area well that was created with the new penthouse mechanical room.

The electrical scope of work includes the extension of the normal and emergency (life safety, critical, and equipment branches) power systems, fire alarm upgrades, new energy efficient lighting, new audio/visual nurses’ call system, etc. The normal power distribution system for the project originates at the existing normal power switchboards in the sub-basement main electrical room.

The fire alarm upgrades involve providing a completely addressable system including pull stations, strobes, audible devices, and smoke detectors. New state-of-the-art energy efficient lighting fixtures will be provided throughout the addition.

$40M project—Expected completion in 2015.

- **Construction Manager**: Suffolk Construction
- **Architect**: Perkins + Will
- **Structural Engineer**: Simpson Gumpertz & Heger
- **MEP/FP Engineer**: AKF Group, LLC
- **Walter Pochebit** – Assoc VP Facilities Management and Engineering/MMC
- **Richard Linehan** – Director of Planning / MMC
- **Marshall Bartlett** – Project Manager / MMC
NEHES is offering a special Leadership Series in 2015. The program will consist of five one-day sessions (roughly one per quarter through January 2015- January 2016) facilitated by Ken Blanchard Companies senior consultant, S. Chris Edmonds.

Courses slated for the program include:

**Situational Leadership® II**

SLII® is Blanchard's flagship leadership program, proven in hundreds of thousands of clients across a wide range of industries, countries, and generations. This course teaches leaders how to manage both results and relationships using a simple model based on the team member's task-specific needs and the leader's matching leadership behaviors.

Depending on the task, a leader might need to teach the team member needed skills to do that task – or the leader might need to delegate authority and responsibility to the team member because they have demonstrated skills and commitment to that task. It's situational – it depends.

This one-day program helps leaders diagnose team member's task-specific needs then provide the matching combination of direction and support. When that happens, team member productivity and commitment increases.

**DISCovering Self and Others®**

Understanding human behavior and personal chemistry is a powerful tool to enhance work relationships. When individual behavioral style characteristics are known, people can understand what drives others and interact more successfully. Understanding your own behavior patterns and others' patterns can help you learn to work better with people who are wired differently than you.

This one-day program is structured to help individuals determine their preferred pattern and the inherent strength of their preference as well as the behavioral patterns of others so they can communicate more effectively. Participants learn how their preference differs from others' preferences and how to modify communication styles to increase effectiveness and reduce misunderstandings.

**Conflict Management**

Because no two individuals have exactly the same expectations and desires, conflict is a natural part of our interactions with others. This one-day session features the Thomas-Kilmann Conflict Mode Instrument (TKI), an assessment that measures a person's behavior in conflict situations. "Conflict situations" are those in which the concerns of two people appear to be incompatible. In such situations, we can describe an individual's behavior along two dimensions: assertiveness and cooperativeness.

The TKI assessment indicates the leader's preferences in five conflict-handling modes (combinations of assertiveness and cooperativeness). Learning activities and practice help leaders understand their preferences (their comfortable modes) and opportunities (their less-used modes) so they can increase their effectiveness in dealing with conflict.

**Leading People Through Change**

Organizational change is a fact of business life. New opportunities, new products, and new business initiatives are exciting moments that signal change – and disruption. Most of these change efforts require significant adjustments in how people get work done. Leaders need the buy-in and commitment of the people who are being asked to change in order to achieve the desired results.

This one-day program uses a modified Situational Leadership® II model to teach leaders how to identify and address the typical questions that employees raise during a change, and provide appropriate change strategies to resolve corresponding behaviors and resolve concerns. Leaders will learn the change strategies used to address the most common causes of failure in an organization and how to adapt to the predictable stages of concern.

**Servant Leadership**

Business leaders that realize that teams are more powerful than the sum of the individuals treat their team members as vital players and important internal customers in their organizations. Servant leadership is a philosophy that helps leaders influence others from a place of trust and respect – guiding, partnering, and serving their team members each day.

This one-day session is taught by one of the program co-authors. It is a unique exploration of the time-tested leadership principles of one of the world's most notable leadership development experts.

This program's highly personalized curriculum gives participants an in-depth assessment of their current strengths and weaknesses and presents executives with actionable data and experiences to help participants serve their organization and their team members.

**Course Schedule:**

Five classroom sessions at a yet-to-be-determined location in central New England, and four webinars over the course of 13 months.

**On-site Classes:**

1 – Jan 27, 2015  
2 – Apr 28, 2015  
3 – Jul 28, 2015  
4 – Oct 27, 2015  
5 – TBD - Late January 2016

**Webinars:**

March 13, 2015  
June 12, 2015  
September 11, 2015  
TBD – late 2015

For More Information Contact:  
Jona Roberts, CHFM, SASHE  
Engineering Manager  
[603] 650-8457  
Jona.Roberts@hitchcock.org
Engineering Energy Savings

Case Study from the University of Vermont Medical Center

Wes Pooler, CHFM
Director of Facilities Management at the University of Vermont Medical Center.

In today’s sustainability-minded society, we often assume that expensive alternative energies are the best way to “go green.” But through my work as Director of Facilities Management, I’ve learned that we can significantly reduce energy use by simply re-engineering our existing infrastructure.

In recognition of National Health Care Facilities and Engineering Week (October 19–24, 2014), I’d like to share how our Facilities Management team has helped the University of Vermont Medical Center go green—without spending a lot of green.

Our Impact on the Community

Hospitals and their employees assume an awful lot of responsibility in the community, especially when it comes to energy consumption. A hospital may be one of the largest employers in a region, and consequently, one of its biggest energy users.

So how much energy is required to provide outstanding patient care and support our diverse staff of doctors, nurses, accountants, chefs, programmers, scientists, engineers, and more? Consider this: in 2013, the average Vermont home consumed approximately 6,915 kWh of electricity.

At the Medical Center Campus, we consumed over 3.9 million kWh of electricity—or the equivalent of 5,640 homes.

Though the task of reducing this number may seem daunting, I see an opportunity to positively impact our environment—and our community. I consider it our responsibility to become the most energy-efficient hospital possible. I also believe we can reduce energy consumption and costs while continuing to improve our already world-class care.

Our Approach to Sustainability

Our team of highly skilled carpenters, electricians, plumbers, and mechanical systems professionals accomplished this not by installing expensive solar arrays, windmills, or other extravagant systems, but instead by re-engineering and updating our existing infrastructure and systems.

Some of our recent projects include:

- Installing boiler controls on our three largest boilers. This has maximized the efficiency of our burners, thereby reducing our natural gas consumption by 150,000 CCF—equivalent to 150 homes.
- Converting to LED lighting in our parking lots and roadways. We’ve also started replacing our indoor fluorescent lights with energy-efficient LED bulbs.
- Upgrading the controls on our largest air handler. By improving the controls on our largest air handler (which is the size of a large house), we’ve maximized output while minimizing fan speed. In other words, we use less electricity to operate at maximum efficiency.
- We take the mantra “Reduce, Reuse, Recycle” seriously. We’ve reused our existing infrastructure without adding excessive new material, taking up more space, or spending lots of money. And while our work is far from finished, I’m excited to develop more energy saving methods for the sake of the UVM Medical Center, our community, and the environment.

Randy Hussey, CHFM, CFPS—Fire & Life Safety Officer, Eastern Maine Medical Center—Bangor, ME

ASHE Advocacy highway is a two-way communication street between ASHE and Chapter advocacy liaisons. The goal is to support communication, and improve advocacy efforts at the national, state and local level. ASHE provides practical tools and resources to empower chapter advocacy liaisons.

A goal for the 2015 NEHES Advocacy Committee is to effectively communicate the Online Tool Kit with ASHE Advocacy. ASHE sends notice of new or impending regulations or their interpretations to ASHE members and the advocacy liaisons’ for each ASHE chapter. The liaisons distribute this information to their chapter members and ASHE will use the information in national code reform initiatives as validation of contradictory and/ or confusing regulations.

Members should be aware of important compliance changes affecting health facilities.

The Centers for Medicare and Medicaid (CMS) significantly restricts the use of power strips in patient care areas.

The good news is that on September 24, 2014 CMS issued S & C: 14046-LSC detailing a Categorical Waiver.

The categorical waiver states that CMS has determined that the 2000 edition of the National Fire protection (NFPA) 101 Life Safety Code (LSC) contains provisions on the use of power strips in health care facilities that may result in unreasonable hardship for providers or suppliers. In addition, an alternative level of protection may be achieved by compliance with the 2012 edition of the LSC, which extends allowance on power strip usage in patient care areas.

CMS is permitting the categorical waiver to allow for the use of power strips in existing and new health care facility patient care areas, if the provider/supplier is in compliance with all applicable 2012 LSC power strip requirements and with all other 2000LSC electrical system and equipment provisions.

An individual waiver is not required but providers and suppliers are expected to have written documentation that they have elected to use the waiver. This information must be presented the LSC survey team at the entrance conference.

We will send more info as it is available.

If you have a question on code compliance or regulations, you can Just Ask ASHE at http://www.ashe.org/connect/ask-ashe/. You can also contact me directly at rhussey@emhs.org
# Chapter Leadership in New England

## Presidents and Chapter Representatives

### Connecticut Healthcare Engineers’ Society

**President:**
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New London, CT  
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**Chapter Representative:**
Paul Roth, CHFM

### Maine Healthcare Engineers’ Society

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### Massachusetts Healthcare Facility Professional Society, Inc.

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**Chapter Representative:**
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### Rhode Island Healthcare Engineers’ Society

**President:**
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**Chapter Representative:**
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### Vermont Healthcare Engineers’ Society

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**Vice-President:**
Peter Irving, Mgr. Facilities Operations  
Fletcher Allen Health Care  
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## NEHES Time Travel with Stops in 1985, 1999, and 2001

### From October, 1985, the NEHES Newsletter covered a growing condition called “MA or Maintenance Anxiety”

Maintenance Anxiety (MA) is our name for a chronic managerial nervous disorder which we find afflicts the majority of hospital administrators at least to some degree. MA is characterized by a chronic, irrational aversion to dealing with the hospital’s maintenance department. In mild cases, the victim’s administrative abilities are only moderately afflicted and the hospital can still function, albeit at a reduced level of efficiency. In its more advanced stages, however, MA has such a negative effect that the hospital’s operational viability is gravely threatened.

### In 2001, Jim Woods and Tom Humphrey were attired in a Scottish kilt and firefighter’s dress uniform for the Awards Banquet.

The year is 1999 and Gene Cable is covering Life Safety Code questions for NEHES members. He is still doing this today!

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Eugene A. Cable, PE
NEHES News Nuggets

2015 NEHES Educational Events Set

Mark your calendars now for great opportunities in 2015.

- NEHES Spring Seminar—Friday, March 20 at the DoubleTree by Hilton in Leominster, MA. The event will be chaired by Larry Williams and the Massachusetts Healthcare Engineers Society. Right before “mud season” goes into full swing, NEHES members will find great educational sessions, time for networking, and a first class vendor area hosted by our Supporting Members.

- Twin State Seminar— Thursday, August 6, 2015 at Dartmouth-Hitchcock Medical Center in Lebanon, NH - A special shared event by NH and Vermont!

- NEHES Fall Conference—Sunday, September 27 through Wednesday, September 30 at the Newport Marriott in Newport, Rhode Island. The event will be chaired by Jim Carroll and the Rhode Island Healthcare Engineers’ Society. No doubt there will be great presentations and associated events along with time for socializing.

New CHFM Certificants

Congratulations to the following individuals in New England who recently earned their CHFM designation.

Vermont
Raymond Forsell
Robert Prohaska

Massachusetts
Dann Boyer
Thomas Gallagher
Michael Josephson

Maine
Steve Furgeson
Stephen Treadwell

Connecticut
Cristian Castillo

52nd ASHE Annual Conference & Technical Exhibition—July 12—15 in Boston, MA

There’s a triple play coming to New England next July!

- The ASHE national conference is coming to Boston.
- NEHES will be the host chapter to the entire nation.
- Our own NEHES member, Dave Dagenais, will be serving as the ASHE President as the conference comes to historic Boston.

The ASHE Annual Conference and Technical Exhibition is the trusted national conference and trade show for health care facility management and engineering professionals.

More than 3,000 professionals gather on-site to get vital information on health care compliance, codes and standards updates, emerging trends, and best practices for efficiency, sustainability, emergency preparedness, and other pressing topics in the field.

Attendee registration will open in the spring of 2015.

NEHES Hits The Road

Incoming NEHES President, Paul Cantrell wanted to start his term of office by “hitting the road.” Paul Cantrell and Steve Cutter decided to hold the first ever NEHES Motorcycle ride on October 17 this year that would take members and their guests on a scenic route through New Hampshire and Vermont.

“It was purely a social event,” said Cantrell, noting that many Active and Supporting Members enjoy motorcycles. “It was simply a time when members could enjoy each other’s company and socialize away from the worksite.”

The tour began in Concord, NH and wound its way to the edge of Vermont along the Connecticut River, and then on to the renown Kancamagus Highway and back to Concord. “We thought of this as a first Twin State Motorcycle Rally and we are considering a Maine - Mass for next year, and Rhode Island-Connecticut for the following.” If any of you have ideas of routes, please let Paul know.

There were 25 riders at the event who enjoyed lunch at Gordi’s Fish and Steak House in Lincoln, NH compliments of NEHES Supporting Member, Columbia Construction. It was a great meal to go with such an outstanding day.

Thank you Columbia! Watch for more adventures in 2015!
Every 6 months or so, the Joint Commission publishes lists of the top citations across the various types of health facilities it accredits. The top 10 citations for the first half of 2014 were recently released, and not surprisingly, fire protection/life safety deficiencies continued to dominate the list. The top 10 citations and some of our thoughts are provided below:

1. 53% - EC.02.05.01: The hospital manages risks associated with its utility systems.
   This citation includes issues related to inadequate utility systems design or function and jumped from #10 in 2013 to #1 this year. With a strong focus on infectious disease prevention and control, it should come as no surprise that the surveyors are taking a close look to make sure facilities are properly inspecting, testing, and maintaining all of their utility systems, as well as checking for appropriate pressure relationships between sterile and dirty areas.

2. 52% - LS.02.01.20: The hospital maintains the integrity of the means of egress.
   Maintaining the integrity of the means of egress always seems to fall at the top of the list as facility managers’ struggle with policing corridor clutter and keeping egress paths clear. A few useful tips:
   - Egress corridors more than 8 feet in width can partitioned off to store computers and equipment within alcoves.
   - Dead end corridors beyond an egress stairwell can be used to store equipment less than 50 feet in area.
   - Suites, as identified on your life safety plans, are considered as groups of rooms and not corridors, and may be used to store equipment within hallways provided that at least 44 inches of clearance is maintained.
   - Facilities may elect to use the waiver permitted under CMS S&C-12-21 to utilize the 2012 NFPA 101 provisions which allow projections into corridors for wheeled equipment and fixed furniture under certain circumstances. The waiver election must be documented, noted in the Additional Comments section of the BBI, and brought to the attention of surveyors upon arriving on-site.

3. 51% - EC.02.06.01: The hospital establishes and maintains a safe, functional environment.
   A common deficiency under EC.02.06.01 that has been popping up lately is that all safety showers, eye wash stations, and drench hoses are tested per ANSI, OSHA, Joint Commission, and other requirements as indicated in the hospital policy. What does this mean?
   - Use a risk assessment to determine placement of showers and eye washes.
   - Providing a testing policy which specifies test intervals (weekly expected).
   - Document all test results.
   - Ensure the water is tepid between 60°F - 100°F.
   Other issues that commonly plague hospitals include unsecured oxygen cylinders (see our blog post on wwwcrcfire.com), and inadequate ventilation, temperature, and humidity levels within the facility.

4. 50% - EC.02.03.05: The hospital maintains fire safety equipment and fire safety building features.
   Having organized, well-documented inspection and testing reports for your fire protection and life safety equipment and systems is critical. Challenges continue to revolve around facilities holding contractors accountable to provide timely documentation that indicates full compliance with the required standard. Providing follow up documentation that deficiencies from punch lists, work orders, or failed system testing are also commonly overlooked and must be documented to illustrate full compliance. Some best practices include adding applicable code editions and references on all sheets, and cross-referencing test report with corrective work orders.

5. 50% - IC.02.02.01: The hospital reduces the risk of infections associated with medical equipment, devices, and supplies.

6. 49% - LS.02.01.10: Building and fire protection features are designed and maintained to minimize the efforts of fire, smoke, and heat.
   In nearly half of all hospitals, the life safety surveyors continue to cite facilities for problems related to fire/smoke barrier management including penetrations, fire doors, and damper issues. Unsealed penetrations and fire doors with no labels and excessive undercut and gaps continue to be issues for facility managers to stay on top of. Be aware: combustible foam is not a UL-Listed fire stop assembly and cannot be used to seal penetrations. While the product may state UL approved for “fire blocking” this is intended for residential use, and is not appropriate for fire stopping.

7. 49% - RC.01.01.01: The hospital maintains complete and accurate medical records for each individual patient.

8. 46% - LS.02.01.30: The hospital provides and maintains building features to protect individuals from the hazardous of fire and smoke.
   Another key issue is maintaining building features is providing accurate, up-to-date life safety plans. Minimally, the life safety plans should illustrate:
   - Fire safety features
   - Areas of the building that are sprinklered/unsprinklered
   - Hazardous storage areas
   - Fire/smoke barriers
   - Suite boundaries, including sizes and types
   - Smoke compartments, including locations and sizes
   - Chutes and shaft enclosures
   - Any approved equivalencies/ waivers

9. 44% - LS.02.01.35: The hospital provides and maintains systems for extinguishing fires.
   One of the most common issues we see here is maintaining the 18” clearance beneath sprinklers within a storage area. Note that perimeter shelving above the 18” line is permitted unless located directly beneath a sprinkler.

10. 36% - EC.02.02.01: The hospital manages risks related to hazardous materials and waste.

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**By Carl Nelson, P.E. | Principal Code Red Consultants, LLC [crcfire.com](http://crcfire.com) carln@crcfire.com**

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**Joint Commission Top Citations-- First Half of 2014**

**How to Avoid These Pitfalls**
Disinfectant Products for Use

Against Ebola

The Environmental Protection Agency (EPA) has worked closely with Center for Disease Control (CDC) to develop the CDC Interim Guidance for Environmental Infection Control in Hospitals for Ebola Virus.

Although there are no EPA-registered products with specific label claims against the Ebola virus, enveloped viruses such as Ebola are susceptible to a broad range of hospital disinfectants used to disinfect hard, non-porous surfaces.

In contrast, non-enveloped viruses are more resistant to disinfectants. As a precaution, the selection of a disinfectant product with a higher potency than what is normally required for an enveloped virus is being recommended by the CDC at this time.

EPA-registered hospital disinfectants with label claims against non-enveloped viruses (e.g., norovirus, rotavirus, adenovirus, poliovirus) are broadly antiviral and capable of inactivating both enveloped and non-enveloped viruses and are used to disinfect environmental surfaces in rooms of patients with infectious diseases.

For more info: EPA website Disinfectant Products

Hospitals Waste Unused Surgical Supplies

A Johns Hopkins research team reports that major hospitals across the U.S. collectively throw away at least $15 million a year in unused operating room surgical supplies that could be salvaged and used to ease critical shortages, improve surgical care and boost public health in developing countries.

A report on the research, published online Oct. 16 in the World Journal of Surgery, highlights not only an opportunity for U.S. hospitals to help relieve the global burden of surgically treatable diseases, but also a means of reducing the cost and environmental impact of medical waste disposal at home.

The fact of surgical supply waste is nothing new, the researchers note, but say their investigation may be one of the first systematic attempts to measure the national extent of the problem, the potential cost savings and the impact on patients’ lives.

While several organizations run donation programs for leftover operating room materials, such efforts would be far more successful if they were made standard protocol across all major surgical centers, the authors say. Go to Unused Surgical Supplies.

ECPRA Forms Due March 1

You have until March 1, 2015 to submit your organizations Emergency Planning and Community Right to Know Act (ECPRA) Tier 2 Forms.

Have you filed? Every March 1st, facilities covered by EPCRA must submit an emergency and hazardous chemical inventory form to the Local Emergency Planning Committee (LEPC), the State Emergency Response Committee (SERC), and the local fire department annually. Many hospitals have materials, chemicals and/or fuels above ECPRA reporting thresholds of 10,000 pounds. Don't forget to look at the capacity of both above and below ground tanks. Some hospitals also have Extremely Hazardous Substances (EHS), which is a specific list with thresholds of 500 pounds or less.

Information about Tier 2 reporting and the Tier2 Submit 2014 software can be accessed from EPA Headquarters website. This website includes state by state link to your state specific reporting requirements and contacts.

ASHE Risk Assessment Tool

ASHE is working to develop a risk assessment tool that facility managers will be able to use to change preventive maintenance programs based on data.

ASHE is sifting through repair histories on various pieces of facility equipment in several hospitals and will use that data to develop the tool for members. To learn more about this project or to have your hospital participate in the creation of this tool, contact ASHE Engineering & Compliance Director John Collins, FASHE, HFDP, at jcollins@aha.org.

Energy University Offers Class on Retrocommissioning

A new retrocommissioning class is now being offered through Energy University. ASHE members get complimentary access to Energy University through ASHE’s University Program Partner, Schneider Electric.

The new class—Retrocommissioning: Energy Savings Solutions for Healthcare—explores ways to lower operational costs by increasing energy efficiency. To register for the class or learn about other offerings and tracks, visit the ASHE website.

Energy University offers three ASHE Learning Paths and is a robust program of e-learning courses focusing on key energy efficiency topics affecting today’s health care facilities. These courses—available at no cost—provide the information you need to identify, monitor, and manage energy use and to find new ways to simply and effectively create efficiency in any building or structure.

Energy University’s ASHE Learning Paths identify courses specific for health care facility managers, energy managers, and technicians. They include:

• ASHE: Energy Manager Energy Management
• ASHE: Healthcare Facility Manager Comprehensive Energy Management

The Joint Commission

• ASHE: Technician Comprehensive Energy Management

Ask the Joint Commission!

Did you ever have a question about a Joint Commission Standard that you want to have answered? Why not contact TJC directly?

Use this link to the Standards Online Submission Form. Provide information about yourself and your organization and then send off the question to TJC di-
New ASHE Monograph Addresses Hospital Emergency Power Issues

ASHE has just published a new 80+ page management monograph detailing a comprehensive program for managing hospital emergency power systems.

This document addresses recent lessons learned, best practices, and new regulatory issues.

The publication, titled “Managing Hospital Emergency Power Systems: Testing, Operation, Maintenance, Vulnerability Mitigation, and Power Failure Planning,” by David L. Stymiest, PE, CHFM, CHSP, FASHE, holistically describes a comprehensive and proactive management program for emergency power systems.

Since this monograph is intended to reflect recommended best practices, its content is not limited to older CMS-imposed regulatory requirements. However, it does discuss changes in the 2012 through 2014 editions of relevant ANSI and NFPI standards.

There are new sections on:
- Commissioning emergency power systems
- Finding and mitigating emergency power system vulnerabilities
- Conducting more robust weekly emergency power system inspections
- Mitigating emergency power system vulnerabilities with best practice means and methods

The new monograph also expands previous discussions from the 2009 edition to include the latest thinking on:
- Installation acceptance testing
- Emergency power test procedures
- Vulnerability analyses and risk assessments
- Maintenance of generators, transfer switches and other system components

The new section on commissioning emergency power systems discusses its importance, the types of vulnerabilities commonly found during commissioning processes, and the topic of functional performance testing.

The new discussion on conducting more robust weekly inspections addresses system elements and areas beyond just the generators and batteries. The comprehensive section on testing covers not only the required elements to satisfy authorities having jurisdiction but also best practices related to operational impacts and second order consequences of hospital emergency power testing activities.

Determining the actual emergency power demand loading and other utility management considerations are covered within the section on operation. Power failure contingency planning and other related emergency management topics are covered within the section on planning for power failures.

ASHE members can download the new monograph for free from ASHE’s website. Those who are not ASHE members will be able to purchase the monograph from the ASHE Store.

More Hospitals Shunning Furniture With Flame Retardants from Modern Healthcare

A few months ago, Kaiser Permanente said it would stop buying furniture with flame retardants because the chemicals are believed to be toxic. Now several other large hospital systems are following suit.

A group of hospital systems—Advocate Health Care, an 11-hospital based in Downers Grove, Ill.; Beaumont Health System, a three-hospital system based in Royal Oak, Mich; New Jersey's 685-bed Hackensack University Medical Center; and University Hospitals, a six-hospital system in Ohio—said this week they will buy upholstered furniture only if the pieces do not contain flame retardant chemicals. The new policies don’t generally apply to medical furniture such as exam tables or bed mattresses.

The policy shift is, in part, a response to a new California law that removed a requirement that furniture makers put flame retardants into upholstered furniture. The chemicals had been required as a way to prevent cigarette fires but have since been tied to a range of health conditions including developmental delays in children and cancer.

"BMH is proud to be participating with Winstanley and partners by obtaining a significant portion of the hospital's power needs via this solar power," said BMH Director of Plant Services and NEHES member, Robert Prohaska. "This is another example of how BMH is working toward sustainability across our operations. This dovetails perfectly with BMH's mission to serve our community."

The electricity generated by the North Springfield array will serve the main BMH building and generate significant savings for BMH during the 25-year term of the agreement.

Winstanley Enterprises is working to develop up to five 500 kw metered solar arrays for schools and municipalities in the area.

The energy consuming institutions sign on to the projects, agreeing to use the power which allows Winstanley to move ahead with the large projects.
Events & Dates to Remember

- **March 20, 2015**
  NEHES Spring Seminar at the DoubleTree by Hilton in Leominster, MA
  Organizers: Massachusetts Healthcare Engineers’ Society—Chair: Larry Williams

- **March 15-18, 2015**
  ASHE Summit & Exhibition on Health Facility Planning, Design, & Construction
  San Antonio, Texas

- **July 12-15, 2015**
  ASHE Annual Conference and Technical Exhibition
  Boston, MA

- **July 12, 2015**
  Certified Healthcare Facility Manager (CHFM) Exam **Review Course**
  Boston, MA

- **July 13-14, 2015**
  Health Care Construction (HCC) Certificate Workshop - Boston, MA

- **September 27—30, 2015**
  NEHES Fall Conference
  Newport Marriott- Newport, Rhode Island
  Organizers: Connecticut Healthcare Engineers’ Society—Chair: Jim Carroll

For full list of **ASHE Calendar of Events**

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**Thanks to our NEHES President—Ed Lydon**

Thank you Ed Lydon for a successful year as our President! You have continued the proud NEHES tradition of dedication and leadership.

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**Thanks to our 2014 Fall Conference Exhibitors**

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  - F.W. Webb Co.
  - Fiberlock Technologies
  - Filter Sales & Services, Inc.
  - Gale Associates, Inc.
  - Gleeson Powers Inc.
  - HILTI, Inc.
  - Hospital Energy
  - IGS Energy
  - Innovative Engineering Solutions Inc.
  - Isgenuity LLC
  - J.S. Fleming Associates, Inc.
  - Koffel Associates
  - MBH ARCHITECTURE, LLC
  - Moser Pilon Nelson, Architects, LLC
  - Northeast Door Company
  - O&G Industries, Inc.
  - Pritchard Brown
  - Red Hawk
  - Russell Phillips & Associates
  - Safe Check East Inc.
  - SMRT
  - Specified Technologies Inc.
  - Standard Builders
  - Swisslog Healthcare Solutions
  - SynergyOne Solutions/AirCare
  - The Garland Company, Inc.
  - The Scott Lawson Group, Ltd.
  - The Whiting-Turner Contracting Co.
  - TPC Systems
  - TSIG Consulting-RT Cotter Division
  - Wise Construction
  - Z-Band, Inc.