

Volume XXVII, Issue 3

Serving the Hudson Valley and Western Connecticut

November 2013

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Upcoming Events

- December 11 -Chilled Water Low Delta T
- January 15 -Save the date
- January 18 through 23 -ASHRAE 2014 Winter Conference New York City
- February 12 -Environmental Air Quality
- March 12 -Save the date
- April 9 -Save the date
- May 14 -Golf Outing
- June 11 -Save the date
- August 14 through 16 -ASHRAE Region 1 $2014~\mathrm{CRC}$ Hosted by Bi-State Chapter

Meeting Wednesday November 13, 2013

Tour of IBM East Fishkill Central Utility Plant IBM, Hopewell Junction, NY at 5:30pm

Please join us on Wednesday, November 13th for the November chapter meeting – a tour of the IBM East Fishkill Central Utility Plant located in Hopewell Junction, New York. The East Fishkill campus, which covers over five million square feet, houses 300mm and 200mm semiconductor wafer manufacturing facilities, various support labs, offices, warehouse space, chemical distribution, waste treatment facilities, and leased tenant areas. IBM Facilities Mechanical Engineers T.J. Kieper, P.E. and Nate Kochie will cover a basic overview of the equipment, controls, and operation of the central utility plant. The tour will include the high and low temperature chilled water plants (44,000+ total tons of refrigeration), the high temperature hot water plant (480 million BTU per hour output), and the compressed air plant (38,500 standard cubic feet per minute), as well as several support systems. There are not many sites in the country that match the magnitude and complexity of this plant, so take advantage of the opportunity to get out in the field and see some very large equipment in action!

Please RSVP to T.J. Kieper (email: kiepertj@gmail.com / Ph: 518-928-6965) or Terry Connor (email: Terry.Connor@jci.com / Ph: 914-593-5223) if you plan on attending.

Pizza and Soda will be served before the tour begins. Our standard meeting charge (\$25 for ASHRAE Members; \$30 for non-members) will apply.

Directions to the plant can be found on page 7.

President's Message

By Terry Connor, LEED AP

I'm very excited about this month's chapter meeting, and I hope many of you will be able to join us for the tour of the IBM East Fishkill Central Utility Plant in Hopewell Junction, NY. This truly is a rare opportunity to see some incredibly large, complex mechanical systems in person. On behalf of the entire Board of Governors, we hope to see you there!

I also want to remind everyone to take the opportunity to check out the new ASHRAExCHANGE online community forum. It's available through the ASHRAE website at: https://www.ashraexchange.org. There are many interesting topics and threads – with interesting discussions on Indoor Air Quality, Data Center design and VRF systems, just to name a few. If you look closely, you can even find ASHRAE's current President, Bill Bahnfleth, weighing in with his thoughts on several of these issues!

Finally, I would like to remind all of our members that we are still in need of volunteers for the Region 1 2014 CRC in Tarrytown, NY during the weekend of August 14th thru the 16th, 2014. As hosts of the 2014 CRC, the Bi-State Chapter will need additional volunteers above and beyond what it normally takes to run the Chapter during a 'normal' year. Please consider volunteering so that we can make this event a success! Contact Mike Circosta or Cliff Konitz (our CRC Committee co-chairs) for more details.

Terry Connor, LEED AP Bi-State Chapter President

Historical Note — **Bob Roston**, **Bi-State Historian Steam Circulation**

In 1882, Napoleon Williams of Philadelphia patented in this country the art of circulating exhaust steam by the mechanical reduction of pressure upon the heating system. This being the foundation patent, broad claims were allowed, and every system of vacuum heating using mechanically induced circulation is founded more or less on this patent.

In 1891 a patent was issued to Willis E. Hall, which, broadly stated, in its subsequent use consisted of the application of a thermostatic valve (trap) to the Williames system, and it seems as if the clearest way to describe it, is to call it the Williames thermostatic system.

Based solely on these two patents, with the addition from time to time of a few upon specific forms of thermostatic valves and special devices for better control of various features, a system of steam circulation was developed and sold in considerable quantity."

— A new system of vacuum return line exhaust steam circulation by James A. Donnelly The Heating and Ventilating Magazine, October 1904

New IECC Includes Sweeping Changes for Existing Buildings

The recently finalized 2015 International Energy Conservation Code (IECC) includes important higher efficiency requirements for existing buildings, controls for lighting and daylighting hardware and HVAC equipment specifications, according to the New Buildings Institute (NBI). "Taken together, the approved code changes represent the most significant code revisions for energy consumption of existing buildings since the 1970s," said Jim Edelson, NBI senior manager of Codes and Policy. The IECC is reviewed and updated every three years and serves as the model energy code for many states and local jurisdictions. Code officials and local government representatives voting on the new IECC approved a new chapter that has separate sections for additions, alterations and repairs. The sections of the new chapter clearly define the activity types and describe how the provisions of the code apply. Other changes include provisions for new HVAC technologies, lighting and daylighting, and historic buildings.

ASHRAE Publishes 2013 Version of IAQ Standard

The 2013 version of ASHRAE's indoor air quality standard contains several revisions to help users better meet its requirements. Newly published, ANSI/ASHRAE Standard 62.1-2013, *Ventilation for Acceptable Indoor Air Quality*, sets minimum ventilation rates and other requirements for commercial and institutional buildings.

The 2013 standard combines the 2010 standard and 10 published addenda to that edition, providing an easy-to-use consolidated standard. Specific information on the contents of each addendum and approval dates for each addendum are included in Informative Appendix J at the end of the standard.

"The 2013 version of Standard 62.1 continues the trend of increasing clarity while adding flexibility," Roger Hedrick, Standard 62.1 committee chair, said. "These changes will allow designers and building operators to meet the requirements of the standard and provide adequate ventilation airflow to occupants while reducing excess ventilation and the associated energy consumption."

The 2013 edition of the standard revises and improves the standard in several ways. A number of changes remove inconsistencies within the standard and improve clarity. Significant changes include:

- Table 6-2, Zone Air Distribution Effectiveness is modified to increase the ventilation effectiveness of underfloor air distribution systems that meet certain conditions.
- Requirements for the quality of water used in humidification systems are modified and clarified.
- Building level pressurization requirements were clarified, including adding a definition of "exfiltration."
- A performance alternative to the prescriptive exhaust rates is added. This approach differs from the Indoor Air Quality Procedure, the existing performance-based method for setting supply ventilation rates, in that monitoring of the concentrations of contaminants of concern is required and provides the basis for control of exhaust flow rates.
- Some changes to the ventilation rates and space types in Table 6-1 are made. These add refrigerated warehouses and change the ventilation rate for sports related spaces to include a per occupant component which then allows the use of demand controlled ventilation in these spaces.
- The filtration requirement on air entering wetted cooling coils has been modified to change the MERV rating from 6 to 8. This change will reduce potential for particulate deposition on the coils that could lead to biological or other contamination on the coils.
- Toilet exhaust air that is cleaned to Class 1 may be recirculated.

The cost of ANSI/ASHRAE Standard 62.1-2013, *Ventilation for Acceptable Indoor Air Quality*, is \$79 (\$67 ASHRAE members). To order, contact ASHRAE Customer Contact Center at 1-800-527-4723 (United States and Canada) or 404-636-8400 (worldwide), fax 678-539-2129, or visit www.ashrae.org/bookstore.

ASHRAE, IAQA Sign Memorandum of Understanding

Through a memorandum of understanding, ASHRAE and the Indoor Air Quality Association (IAQA) are working together to promote better indoor air quality in the built environment. The agreement commits ASHRAE and IAQA to working together in the areas of consistent leadership communication, chapter collaboration, advocacy, technical activities coordination and research.

"As professionals responsible for environmental control of buildings and transportation systems, our first priority must be making those environments safe, healthy, productive and comfortable," ASHRAE President William "Bill" Bahnfleth said. "This partnership between ASHRAE, a worldwide organization with a scope to broadly promote the arts and science of HVAC&R and allied arts and science for the benefit of the general public, and IAQA, an organization focused on services to ensure good indoor air quality, will enhance the ability of both to achieve their shared goals. We welcome the opportunity to combine the resources of ASHRAE with the expertise of IAQA to strengthen our effectiveness in this critical area."

"This agreement is a great step forward for IAQA and the indoor air quality field. ASHRAE and IAQA have agreed to work closely on issues that are of mutual interest," Donald M. Weekes, CIH, CSP, IAQA President, said. "I am personally looking forward to working with ASHRAE in the coming year."

ASHRAE Learning Institute

Seminars & Courses at ASHRAE's Winter Conference and AHR Expo in New York, NY

2 WAYS TO REGISTER

Internet: www.ashrae.org/newyorkcourses

Phone: Call 1-800-527-4723 (US and Canada) or 404-636-8400 (worldwide)

Full-Day Professional Development Seminars

\$485/\$395 ASHRAE Member -- Earn 6 PDHs/AIA LUs or .6 CEUs

Commercial Building Energy Audits NEW!

Saturday, Jan 18 – 8:00 a.m. to 3:00 p.m.

Healthcare Facilities: Best Practice Design & Applications

Saturday, Jan 18 – 8:00 a.m. to 3:00 p.m.

Significant Changes to Standard 90.1-2010 and IECC-2012 NEW!

Tuesday, Jan 21-9:00 a.m. to 4:00 p.m.

Energy Modeling Best Practices and Applications

Tuesday, Jan 21-9:00 a.m. to 4:00 p.m.

Effective Energy Management in New and Existing Buildings

Wednesday, Jan 22 - 9:00 a.m. to 4:00 p.m.

Operations and Maintenance of High-Performance Buildings

Thursday, Jan 23 - 8:00 a.m. to 3:00 p.m.

Complying with Standard 90.1-2013 NEW!

Thursday, Jan 23 - 8:00 a.m. to 3:00 p.m.

Introduction to Building Enclosure Commissioning NEW!

Thursday, Jan 23 - 8:00 a.m. to 3:00 p.m.

Half-Day Short Courses

\$159/\$119 ASHRAE Member -- Earn 3 PDHs/AIA LUs or .3 CEUs

Electric Rates, Rules and Regulations NEW!

Saturday, Jan 18 – 12:00 p.m. to 3:00 p.m.

Laboratory Design: The Basics and Beyond

Sunday, Jan 19 – 2:00 p.m. to 5:00 p.m.

Air-to-Air Energy Recovery Applications: Best Practices

Sunday, Jan 19 - 2:00 p.m. to 5:00 p.m.

Mathematical Optimization Techniques and their Applications:

to HVAC&R Systems and Components Sunday, Jan 19 – 2:00 p.m. to 5:00 p.m.

Combined Heat & Power: Design through Operations

Monday, Jan 20 - 8:30 a.m. to 11:30 a.m.

High-Performance Building Design: Applications and Future Trends

Monday, Jan 20 - 8:30 a.m. to 11:30 a.m.

IAQ Best Practices for Design, Construction and Commissioning NEW!

Monday, Jan 20 - 8:30 a.m. to 11:30 a.m.

Commissioning for High-Performance Buildings

Monday, Jan 20 - 2:45 p.m. to 5:45 p.m.

Designing High-Performance Healthcare Facilities NEW!

Monday, Jan 20 - 2:45 p.m. to 5:45 p.m.

Exceeding Standard 90.1-2013 to Meet LEED® Requirements NEW!

Monday, Jan 20 - 2:45 p.m. to 5:45 p.m.

Data Center Energy Efficiency

Tuesday, Jan 21 - 1:00 p.m. to 4:00 p.m.

Fundamentals and Applications of Standard 55 NEW!

Tuesday, Jan 21 - 1:00 p.m. to 4:00 p.m.

Design of Commercial Ground Source Heat Pumps NEW!

Tuesday, Jan 21 - 1:00 p.m. to 4:00 p.m.

Applications of Standard 62.1-2013: Multiple Spaces

Equations and Spreadsheets NEW!

Wednesday, Jan 22 - 9:00 a.m. to 12:00 p.m.

Troubleshooting Humidity Control Problems

Wednesday, Jan 22 - 1:00 p.m. to 4:00 p.m.

HVAC Design Training

March 17 - 19, 2014 --- Level I - Essentials --- Atlanta, GA and Toronto, Canada

March 20 - 21, 2014 --- Level II - Applications --- Atlanta, GA

HVAC Design: Level I - Essentials - Registration is \$1,239, \$989 (ASHRAE Member)

Gain practical skills and knowledge in designing, installing and maintaining HVAC systems that can be put to immediate use. The training provides real-world examples of HVAC systems, including calculations of heating and cooling loads, ventilation and diffuser selection using the newly renovated ASHRAE Headquarters building as a living lab.

HVAC Design: Level II - Applications - Registration is \$829, \$679 (ASHRAE Member)

In two days, gain an in-depth look into *Standards 55*, 62.1, 90.1, and 189.1 and the *Advanced Energy Design Guides*. Training will focus on a range of topics including: HVAC equipment and systems; energy modeling; designing mechanical spaces; designing a chiller plant; and BAS controls.

Visit www.ashrae.org/hvacdesign to register

President Barack Obama Signs Executive Order on Response to Climate Change

A year after Superstorm Sandy devastated the East Coast, President Barack Obama signed an executive order on November 1 to make it easier for states and local governments to respond to weather disasters.

The executive order establishes a task force of state and local officials to advise the administration on how to respond to severe storms, wildfires, droughts and other potential impacts of climate change. The task force includes governors of seven states and the governor of Guam, a U.S. territory. Fourteen mayors and two other local leaders also will serve on the task force.

The task force will look at federal money spent on roads, bridges, flood control and other projects. It ultimately will recommend how structures can be made more resilient to the effects of climate change, such as rising sea levels and warming temperatures.

The White House said the order recognizes that even as the United States acts to curb carbon pollution, officials also need to improve how states and communities respond to extreme weather events such as Sandy. Building codes must be updated to address climate impacts and infrastructure needs to be made more resilient, the White House said in a statement.

The task force includes Govs. Jerry Brown of California, Jay Inslee of Washington and Neil Abercrombie of Hawaii, as well as Delaware Gov. Jack Markell, Maryland Gov. Martin O'Malley, Vermont Gov. Peter Shumlin and Illinois Gov. Pat Quinn. The panel also includes several city mayors, including Los Angeles Mayor Eric Garcetti, Philadelphia Mayor Michael Nutter and Houston Mayor Annise Parker.

The task force builds on efforts President Obama announced at a speech at Georgetown University in June to combat global warming, including the first-ever limits on climate pollution from new and existing power plants. "The question is not whether we need to act," Mr. Obama said at the time. "The question is whether we will have the courage to act before it's too late."

The plan is intended to reduce domestic carbon dioxide emissions by 17 percent between 2005 and 2020. The plan also would boost renewable energy production on federal lands, increase efficiency standards and prepare communities to deal with higher temperatures. The 12 hottest years on record all have occurred in the past 15 years.

The plan would be put in place through executive order, bypassing Congress, which has stalemated over climate legislation. The task force on resiliency is expected to hold its first meeting this winter.

Sacramento, California Utility to Launch Concentrating Solar Power-Natural Gas Project

The Energy Department recently announced a new concentrating solar power (CSP) project led by the Sacramento Municipal Utility District (SMUD). The project will integrate utility-scale CSP technology with SMUD's 500-megawatt (MW) natural gas-fired Cosumnes Power Plant. Supported by a \$10 million Energy Department investment, this project will help design, build and test cost-competitive CSP-fossil fuel power generating systems in the United States.

"Innovative systems that combine solar power with traditional energy sources will help cut carbon pollution across the U.S. power sector while improving the efficiency and performance of both resources," said Assistant Secretary for Energy Efficiency and Renewable Energy David Danielson.

Concentrating solar power technology uses sunlight to produce steam, which is then used to generate electricity. Hybrid systems couple traditional fossil fuel-powered plants with CSP technology to improve the efficiency and performance of both systems and marry baseload power with new, cost-effective capacity. Today, between 11 and 21 gigawatts of CSP could be built and integrated into existing fossil fuel plants in the United States – enough to power to between 3 million and 6 million homes.

The SMUD project will feed solar-produced steam directly into the plant's turbines – generating at least 10 MW of new electric generation capacity. The project will include energy storage technology to improve system performance and meet peak and off-peak power needs.

ASHRAE Certification Programs

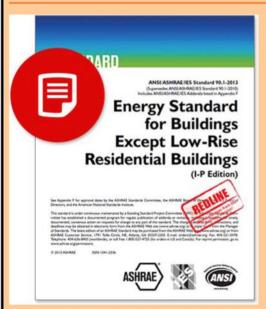
Receive the recognition you deserve by earning an ASHRAE Certification at the 2014 ASHRAE Winter Conference and AHR Expo.

Take advantage of ASHRAE's special administration of the certification examinations on January 23, 2014. All exams will begin at 9:00 a.m. (candidates must report to the testing room at 8:30 a.m.). These exams are being offered in conjunction with the 2014 ASHRAE Winter Conference and AHR Expo in New York City. Refresh your knowledge in preparation of earning an ASHRAE certification with learning opportunities at the show and conference.

For more information, visit www.ashrae.org/NYCExams

Hot Products from ASHRAE

Latest Edition of Standard 90.1 Now Available as a Redline



Priced from \$135 (Members Pay \$115) Available now in I-P or SI units

Use the redline to instantly identify updates in the 2013 revision of Standard 90.1.

Certified

This expanded document compares the 2013 edition to 2010, ensuring you know exactly what changes have been made from one edition to the next.

It's an indispensable reference for engineers and other professionals involved in the design of buildings and building systems. Select the redline upgrade in print or digital format to receive two documents; the clean, active version of the standard and the redline version.

About Standard 90.1-2013: Energy Standard for Buildings Except Low-Rise Residential Buildings (ANSI approved; IES co-sponsored)

provides the minimum requirements for energy-efficient design of most buildings. Learn more

About Redlines: A redline document is a quick, easy way to compare all the changes between the active standard and the previous version. Redlines allow users to instantly identify additions, deletions, and other formatting and content changes. Learn more

Visit <u>www.ashrae.org/bookstore</u> to learn more about this and other outstanding ASHRAE publications!

Directions to IBM East Fishkill Central Utility Plant — ASHRAE Bi-State Utility Plant Tour

Site Address is 2070 Route 52, Hopewell Junction, NY, 12533

NOTE: This address will get you in the area, but will not lead you directly to where you need to be for the tour. Follow the instructions below.

From the Taconic:

Get off 84W at Exit 15 - Lime Kiln Road.

Turn right onto Lime Kiln.

At the second light, turn left at Gate #3.

At the security station gate, tell the security guard that you are with the ASHRAE Utility Plant Tour, and they will open the gate.

Go straight through the blinking light and turn left at the third opening into the B/316 parking lot.

Feel free to park in any open parking space.

The large white fuel oil tanks will be on your right.

The entrance door to the building will be manned in the left corner of the chain link fence gate.





Conference Jan. 18-22 | AHR Expo Jan. 21-23

www.ashrae.org/newyork

Special first timer registration fee available!

Technical Program—features a building-oriented theme, featuring tracks on building information systems; environmental health; international design; and, featured for this Conference, tall building performance.

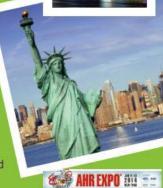
AHR Expo—The ASHRAE co-sponsored AHR Expo takes place Jan. 21–23

(NOTE DAY CHANGE: Tuesday, Wednesday, Thursday) at Javits Convention Center. www.ahrexpo.com

ASHRAE Certification—all six certification programs are being offered: Building Energy Assessment Professional; Building Energy Modeling Professional; Commissioning Process Management Professional; High-Performance Building Design Professional; Healthcare Facility Design Professional; and Operations & Performance Management Professional.

ASHRAE Learning Institute—23 Professional Development Seminars and Short Courses are offered, including 11 new courses that include Standards 55 and 90.1, electric rates and regulations, health care facilities, building energy audits and ground source heat pumps.





ASHRAE Conferences 2013-2014

Attend to See What's New, Learn New Skills, Earn PDHs, Network with Peers

ASHRAE IAQ 2013: Environmental Health in Low Energy Buildings

Oct. 15-18, 2013 | Vancouver, BC, Canada www.ashrae.org/IAQ2013

Comprehensive overview presented via papers.

Co-organizer:



ASHRAE 2014 Winter Conference

Jan. 18-22, 2014 | New York, NY Jan. 21-23, 2014 | AHR Expo www.ashrae.org/newyork

Bookstore Sponsor:



First International Conference on Energy and Indoor Environment for Hot Climates

Feb. 24-26, 2014 | Doha, Qatar www.ashrae.org/hotclimates

Papers focused on arid and humid hot climates.

Organized by:



Qatar Oryx Chapter



Qatar Environment & Energy Research Institute

Member of Qatar Joundation

Co-sponsor:



Gold sponsor:



Endorsed by:









High Performance Buildings Conference

April 7-8, 2014 | San Francisco, Calif. www.hpbmagazine.org/hpb2014 State-of-the-industry presentations



Efficient, High Performance Buildings for Developing Economies

April 24-25, 2014 | Manila, Philippines www.ashrae.org/Developing2014 First ASHRAE conference on this topic.

Organized by: ASHRAE





Co-sponsor:



Endorsed by: (IAP)



ASHRAE 2014 Annual Conference

June 28-July 2, 2014 | Seattle, Wash. www.ashrae.org/seattle

2nd Annual Research Summit presented.

2014 ASHRAE/IBPSA-USA Building Simulation Conference

Sept. 10-12, 2014 | Atlanta, Ga. www.ashrae.org/Simulation2014 Single collaboration of Energy Modeling and SimBuild Conferences.

Organized by: ASHRA





Get Updated on Current Trends and Make Industry Connections at an ASHRAE Conference!

www.ashrae.org/conferences



Albany Wastewater Treatment Plant to Generate Power

An Albany wastewater treatment plant will be one of the first in the nation to generate power. The new \$8.6 million power generator at the North Wastewater Treatment Plant in Menands, neighboring Albany, is part of a decade-long \$100 million push by the New York State Energy Research and Development Authority to help large institutions, colleges, hospitals and municipalities achieve some independence from the power grid. Combined heat and power systems, or cogeneration systems, can be used during outages to generate heat and power, and are more efficient than drawing from the energy grid.

Waste treatment plants across the country burn sludge to dispose of it. The North plant will now capture the heat from that process and turn it into power, Richard Lyons, executive director of the plant, said. It's expected to save taxpayers \$400,000 a year, he said. He said the plant can supply up to 75 percent of its energy needs by burning the sludge, and will take on sludge from other plants to generate more. Officials from California, Michigan and Virginia, as well as New Zealand, have already visited to see if they can build a similar system.

Lyons said the technology is transferable to other industries, such as cement plants, that waste heat by sending it up a pipe. Cogeneration projects are better for the environment, in that they produce less pollution. They also are critically important in areas vulnerable to electrical outages, NYSERDA President John Rhodes said. "Superstorm Sandy has demonstrated the importance of resiliency needed for not only the electric grid but for vital government and health services to operate during a power outage," he said in a statement. NYSERDA contributed \$2 million to the water treatment plant and \$5.8 million was funded through the federal American Recovery and Reinvestment Act.

In peak periods of energy use, such as summer heat waves, cogeneration systems reduce the strain on the state's power grid by taking some of its biggest consumers offline. The systems run on many different kinds of fuels including natural gas, fuel cell and wood pellets. In the last ten years, the state has invested \$100 million into cogeneration systems, which produce a total of 150 megawatts, enough to power 100,000 homes. The systems are located in dozens of apartment buildings, schools, museums and manufacturers. Co-op City in the Bronx has a 40 megawatt cogeneration system, which saves \$18 million a year in energy costs, according to NYSERDA.



APPLY

Each year the ASHRAE Foundation awards scholarships of up to \$10,000 each to qualified students.

DONATE

Help support ASHRAE's student scholarship programs.

www.ashrae.org/scholarships

Bi-State Chapter Officers and Governors 2013—2014

Position	First Name	Last Name	Email	Phone	Fax
Officers					
President	Terry	Connor	Terry.Connor@jci.com	(914) 593-5223	(914) 593-5201
President-Elect	James	Dolan	jdolan@olace.com	(914) 919-3106	(914) 747-0453
Vice President	Cliff	Konitz	c.konitz@verizon.net	(845) 297-5864	(845) 297-5864
Secretary	Brendan	Smith	bsmith@lynstaar.com	(914) 741-1290 ext 17	
Treasurer	Dennis	LaVopa	dlavopa@dlFlowTech.com	(845) 265-2828	(845) 265-2745
Governors					
BOG (term ends June 2016)	Michael	Circosta	mjcarmonk@optonline.net	(914) 273-9173	(914) 273-4097
BOG (term ends June 2016)	Dennis	LaVopa	dlavopa@dlFlowTech.com	(845) 265-2828	(845) 265-2745
BOG (term ends June 2016)	Robert	Roston	bob@rostonfamily.com	(914) 761-3364	(203) 504-7949
BOG (term ends June 2015)	Terry	Connor	Terry.Connor@jci.com	(914) 593-5223	(914) 593-5201
BOG (term ends June 2015)	Brendan	Smith	bsmith@lynstaar.com	(914) 741-1290 ext 17	(845) 297-5864
BOG (term ends June 2015)	James	Dolan	jdolan@olace.com	(914) 919-3106	(914) 747-0453
BOG (term ends June 2014)	Steven	Abbattista	sabbattista@olace.com	(914) 919-3102	(914) 747-0453
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Chapter Alternate	Terry	Connor	Terry.Connor@jci.com	(914) 593-5223	(914) 593-5201
Committee Chairs					
CTTC	Terry	Connor	Terry.Connor@jci.com	(914) 593-5223	(914) 593-5201
Research Promotion	James	Kolk	jkolk@victaulic.com	(631) 219-8502	
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Historian	Robert	Roston	bob@rostonfamily.com	(914) 761-3364	(203) 504-7949
Reception	Joseph	Trongone	jatrong@optonline.net	(914) 332-7658	
Administrator	Cliff	Konitz	c.konitz@verizon.net	(845) 297-5864	(845) 297-5864
Golf	Steven	Abbattista	sabbattista@olace.com	(914) 919-3102	(914) 747-0453

Why Be Involved in a Local Chapter?

- Learn about the latest technologies presented in the program sessions
- Attain continuing education credits
- Meet industry associates and discuss local concerns
- Network amongst designers, installers, vendors, educators, in your local area to help improve business for all
- Share experiences with others
- Enjoy a social hour
- Carry out ASHRAE's mission on a local level

To advance the arts and sciences of heating, ventilating, air conditioning and refrigerating to serve humanity and promote a sustainable world.

Notice to business card advertisers:

We are currently accepting business card advertisements for this year's newsletters. The cost of a business card ad is \$125.00. The newsletter is published monthly, September through June (ten issues). That means for \$125.00 (\$12.50 an issue), your business card ad will circulate to approximately 300 recipients a month or an advertising cost of approximately 4 cents/recipient.

If you are interested in placing an ad, please forward a business card and check (payable to ASHRAE Bi-State) to:

ASHRAE Bi-State Chapter

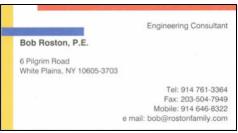
DL Flow Tech 2421 Route 52 Hopewell Junction, NY 12533



















LAWRENCE STURGIS EXECUTIVE VICE PRESIDENT 1 PAULDING STREET ELMSFORD, NY 10523 PHONE: 914-592-1776 FAX: 914-592-1904 e mail: larrysturgis@gmail.com Westchester, Putnam, Rockland, Orange Ulster, Sullivan, Dutchess, Fairfield & Litchfield, Ct.

Employment Opportunities

Employment ads may be submitted for inclusion in The Exchanger as follows:

- 1. \$100.000 from companies placing ad for one (1) month.
- 2. \$150.00 from companies placing ad for two (2) months.
- 3. No charge for members looking for employment.

Energy Efficiency is World's Most Important Fuel

Energy efficiency is the world's most important "fuel," according to a new report from the International Energy Agency (IEA). Investments in energy efficiency provide such large savings that the energy saved completely surpasses the energy generated by most forms of generation. "The scale of recent investment in energy efficiency worldwide makes it as significant in its contribution to energy demand as investment in renewable energy or fossil fuel generation," states the *Energy Efficiency Market Report*. IEA calculates that between 2005 and 2010, that energy-efficiency measures in 11 of IEA's member countries, including the United States, saved the energy equivalent of \$420 billion worth of oil. IEA said that were it not for the implemented energy-efficiency measures, consumers would be using and paying for two-thirds more energy than is the case.



ASHRAE, founded in 1894, is a building technology society with more than 50,000 members worldwide. The Society and its members focus on building systems, energy efficiency, indoor air quality and sustainability within the industry. Through research, standards writing, publishing and continuing education, ASHRAE shapes tomorrow's built environment today.

ASHRAE will be the global leader, the foremost source of technical and educational information, and the primary provider of opportunity for professional growth in the arts and sciences of heating, ventilating, air conditioning and refrigerating.

Upcoming Meetings

Month	Date	Promotion	Main Presentation	Tech Session
December	12/11/2013	Membership Promotion	Chilled Water Low Delta T Mitigation	
January	1/15/2014	Student Activities	Save the date	
January	1/18/2004 through 1/23/2014		ASHRAE 2014 Winter Conference New York City	
February	2/12/2014	Research Promotion	Environmental Air Quality	
March	3/12/2014	Sustainability	Save the date	
April	4/9/2014	Membership Promotion	Save the date	
May	5/14/2014	Student Scholarships	Golf Outing	
June	6/11/2014	Refrigeration	Save the date	
August	8/14/2004 through 8/16/2014		ASHRAE Region 1 2014 CRC hosted by Bi-State Chapter	

MIT Students Develop Wearable Cooling Device

Heating or cooling certain parts of your body — such as applying a warm towel to your forehead if you feel chilly — can help maintain your perceived thermal comfort. Using that concept, four MIT engineering students developed a thermoelectric bracelet that monitors air and skin temperature, and sends tailored pulses of hot or cold waveforms to the wrist to help maintain thermal comfort.

For this invention, the team, called Wristify, took home the \$10,000 first prize at this year's Making And Designing Materials Engineering Competition (MADMEC), held recently. The product is now a working prototype. And although people would use the device for personal comfort, the team says the ultimate aim is to reduce the energy consumption of buildings, by cooling and heating the individual — not the building.

"Buildings right now use an incredible amount of energy just in space heating and cooling. In fact, all together this makes up 16.5 percent of all U.S. primary energy consumption. We wanted to reduce that number, while maintaining individual thermal comfort," says Sam Shames, a mechanical engineering senior who co-invented the Wristify technology. "We found the best way to do it was local heating and cooling of parts of the body." The team estimates that if the device stops one building from adjusting its temperature by even just 1 degree Celsius, it will save roughly 100 kilowatt-hours per month.

The annual competition, now in its seventh year, is run by MIT's Department of Materials Science and Engineering (DMSE), and is sponsored by Saint Gobain, BP, and Dow Chemical. The contest's theme this year was "materials science solutions for sustainability."