



Bi-State Chapter Exchanger

Volume XXVII, Issue 1

Serving the Hudson Valley and Western Connecticut

September 2013

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Upcoming Events

- **October 21 -**
Joint Meeting with AIA Chapter at their Design Expo Event, Westchester Marriot
- **November 13 -**
IBM Chiller Plant Tour (tentative)
- **December 11 -**
Holiday Event (tentative)
- **January 8 -**
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 CRC Hosted by Bi-State Chapter

Meeting Wednesday September 18, 2013

1 PDH Credit Approved

Presentation: Energy and Flow Measurement for Hydronic Systems

Scott Smith, P.E., and Vice President of Accuspec's New Jersey branch, will speak about both Energy Measurement and Flow Measurement – discussing typical applications, measurement accuracy and the benefits and drawbacks of various measurement technologies.

Scott is an active member of the American Society of Heating, Refrigerating and Air Conditioning Engineers and currently serves as President-Elect of the New Jersey Chapter. He is also an active member of the International Society for Pharmaceutical Engineering (ISPE) and is a past board member of its New Jersey Chapter.

Prior to joining Accuspec, Scott had an extensive career with two notable design-build HVAC firms in northern New Jersey. His responsibilities with these firms included sales, marketing, business development, sales management, engineering management, and general management. In these various roles, he has been extensively involved in the design and construction of HVAC and process systems serving pharmaceutical manufacturing, pharmaceutical and chemical research, food processing and specialty manufacturing facilities.

In addition to his Bachelor of Science in Electrical Engineering from Rutgers University, Scott has completed formal HVAC training courses at both the Johnson Controls Training Institute in Milwaukee, WI and at the Carrier Corporation in Syracuse, NY. He successfully passed the Professional Engineering Exam in the mechanical discipline and is licensed to practice in the state of New Jersey. He also holds a certification in air and hydronics balancing from the National Environmental Balancing Bureau (NEBB).

Place: Casa Rina, 886 Commerce Street, Thornwood, NY 10592

Program: 5:30 - 6:00 PM Attitude Adjustment Time
6:00 - 7:30 PM Buffet Dinner
7:30 - 8:30 PM Main Presentation

\$25 Members, \$30 Non-Members

Engineering students: complimentary admission

The general public is invited and encouraged to attend. Walk-ins welcome.

Directions to Casa Rina

From Saw Mill Parkway - North or South
Exit at Marble Avenue - Exit # 27
Make right - continue to second traffic light
Make right onto Commerce Street
Casa Rina is the second house on your left.
Parking is on your right.

For questions about the program email:

Terry Connor Terry.Connor@jci.com

President's Message

By Terry Connor, LEED AP

Welcome back from what was hopefully a relaxing summer for all of our members! I want to begin by thanking John Fusco for leading the Bi-State Chapter as President last year. John volunteered his leadership at a critical time for the Chapter – and he helped right the ship, so to speak, as we moved through a very hectic time.

We have an extremely busy year ahead of us – our regular slate of ten (10) informative monthly meetings – plus, the Bi-State Chapter is hosting the Region 1 2014 CRC in Tarrytown, NY during the weekend of August 14th thru the 16th, 2014. Hosting the 2014 CRC will require a fair amount of additional time above and beyond what it normally takes to run the Chapter. It is my hope that many Bi-State members step up and volunteer to assist with the planning and execution of the CRC. There will be many opportunities to contribute – from assisting with fund-raising to physically being present as part of the 'Welcome Committee' during the 3rd weekend of August. Please consider volunteering so that we can make this event a success!

Our first Chapter Meeting of the year will be held on Wednesday, September 18th at Casa Rina in Thornwood, NY. We're happy to host Scott Smith from Accuspec, Inc – Scott will give a PDH-approved presentation on Energy and Flow Measurement for Hydronic Systems. In October, we are again going to join forces with the AIA Westchester Hudson Valley Chapter for a joint meeting at their Design and Technology Expo at the Westchester Marriott Hotel. Future Chapter Meetings will tentatively include a tour of the IBM Chiller Plant and, of course, our annual Golf Outing at The Links at Union Vale in May, 2014. On behalf of the Chapter Officers and our Board of Governors, we are looking forward to seeing you at all of our upcoming Chapter events!

Terry Connor, LEED AP
Bi-State Chapter President

Historical Note – Bob Roston, Bi-State Historian Regional Meetings

With membership increasing and more chapters being established, the age-old practice of the Society President visit each chapter during his tenure in office became burdensome, and so the Council voted to adopt a Regional Plan with the Society being divided into regions, so that offices other than the President could share in the policy of chapter visits. Whether Regional Meetings could be held successfully was a concern of the Council and the Oklahoma Chapter offered to act as a guinea pig and host a trial balloon Regional Meeting.

— American Society of Heating and Air Conditioning Engineers
Oklahoma Chapter Newsletter, May 1955

Florida Project Produces Nation's First Cellulosic Ethanol at Commercial-Scale

The U.S. Energy Department recently recognized the nation's first commercial-scale cellulosic ethanol production at INEOS Bio's Indian River BioEnergy Center in Vero Beach, Florida. Developed through a joint venture between INEOS Bio and New Planet Energy, the project uses a unique hybrid of gasification and fermentation technology – originally developed with Energy Department support starting in the 1990's – to convert wood scraps, grass clippings and other waste materials into transportation fuels as well as energy for heat and power.

The Indian River County BioEnergy Center (Center) will have an annual output of eight million gallons of cellulosic ethanol per year from vegetative, yard and municipal solid waste as well as six megawatts of clean, renewable power annually – enough to run the entire facility and provide excess power to the local community. The project's gasification-fermentation technology – which produces fuel, heat and power – has its roots in a University of Arkansas research project, supported by a \$5 million Energy Department investment over fifteen years. The Department's early support helped this technology obtain a number of patents, with the core intellectual property purchased by INEOS Bio in 2008. The Vero Beach project will serve as a test bed for producing commercial-scale cellulosic ethanol with this innovative conversion technology – helping to inform future INEOS Bio facilities as well as other advanced biofuel projects across the country.



ASHRAE IAQ 2013

Environmental Health in Low Energy Buildings

October 15–18, 2013

www.ashrae.org/iaq2013



Renaissance Vancouver Hotel Harbourside | Vancouver, British Columbia, Canada

IAQ 2013 reviews the state of knowledge on the balance between environmental health and energy efficiency in the pursuit of low energy buildings.

The conference covers a broad range of topics including residential and commercial buildings, new construction and retrofit, active and passive approaches, design and operation.

IAQ 2013 will help define future design, education, policy and research directions to re-emphasize the importance of environmental health in buildings.

Some 145 conference papers and extended abstracts have been invited. Tracks are as follows:

- Track 1 - Environmental Health in Low Energy Buildings
- Track 2 - Moisture and Health
- Track 3 - Sources and Chemistry
- Track 4 - IEQ Factor Interactions
- Track 5 - Residential Buildings
- Track 6 - Commercial and Institutional Buildings
- Track 7 - Air Cleaning and Filtration
- Track 8 - Microorganisms and Infection
- Track 9 - Tools (models, measurements and more)

A complete listing of accepted conference papers and extended abstracts can be found at www.ashrae.org/iaq2013.

Plenary Lectures will be given by four distinguished international authorities:

- William Bahnfleth, Ph.D., P.E., Fellow ASHRAE, ASME Fellow, Pennsylvania State University, 2013–14 ASHRAE president, “Are We Putting Enough Energy into Making Buildings Healthy?”
- Richard Corsi, Ph.D., P.E. University of Texas, Austin, Indoor Air 2011 president, “Building Energy and Reactivity?”
- Mark J. Mendell, Ph.D., Lawrence Berkeley National Laboratory and California Department of Public Health, “Do We Know Much about Low Energy Buildings and Health?”
- Pawel Wargocki, Ph.D., Danish Technical University, ISIAQ president, “What Can Europe Teach Us?”

Registration	Member	Non-member	Speaker
Early bird through Aug. 30	\$550	\$600	\$400
Regular fee through Sept. 30	\$600	\$650	\$400
Onsite fee beginning Oct. 1	\$650	\$700	\$400

Conference proceedings and breaks, lunches and a reception included in registration fee.

Co-organized by ISIAQ.

IAQ2013 is the 17th in the ASHRAE IAQ conference series.

Surrounded by water on three sides and nestled alongside the Coast Mountain Range, Vancouver is the largest city in the province of British Columbia with over half a million residents and one of the mildest climates in Canada. Home to spectacular natural scenery and a bustling metropolitan core, Vancouver was Host City to the Olympic and Paralympic Winter Games in 2010.



www.ashrae.org/iaq2013

ASHRAE Launches Online Discussion Platform

Through ASHRAExCHANGE, both ASHRAE members and others in the industry are provided with an online platform for real-time discussion and information exchange for design, construction, operation and support of the built environment. The online platform is located at www.ASHRAExCHANGE.org.

“Many ASHRAE members felt there was a need for a place where both ASHRAE members and non-members alike can freely and openly exchange information focused on the built environment,” said Spencer Morasch, incoming chair of ASHRAE’s Electronic Communications Committee. “The information exchange is informal and takes place in real time. So if you have a question at 3 a.m. on a Tuesday night, you can post that on the ASHRAExCHANGE, and chances are, have a reply posted back to you within 24 hours!”

The platform provides a place for users to post and generate discussion on either a general or specific topic. With thousands of ASHRAE members and non-members checking the ASHRAExCHANGE 24/7, the hope is the online discussions will generate plenty of thoughts and comments from many knowledgeable people, according to Morasch.

Anyone with access to the Internet can view posts, comments and messages on the ASHRAExCHANGE at any time. No registration is necessary, and neither is the need for special software, as everything is web-based. Users who want to become active participants and be able to post both initial messages and responses to posts are required to register.

To ensure that the online discussions are professional and in good taste, volunteer moderators are on duty to ensure proper use of the ASHRAExCHANGE. Since discussions and posts are informal and being made in real time, it is not possible to check the technical accuracy of information posted. It is expected that the ASHRAExCHANGE will be “self correcting.” If there are any technical errors posted, someone will post a correction as a reply. “However, no one should use any information posted on the ASHRAExCHANGE as the basis of a design,” Morasch said. “The intention is to help get participants pointed in the right direction or open the thought processes.”

Researchers Developing Low-Energy Personal Heating, Cooling System for Offices

Researchers from UC Berkeley’s Center for the Built Environment (CBE) are using a \$1.6 million grant from the California Energy Commission to develop and promote a new set of tools to enable more efficient temperature control in buildings by using input from building occupants, a network of Web-based applications, and a user-responsive Personal Comfort System (PCS). The PCS uses low-wattage devices embedded into a system of chairs, foot warmers and fans that can quickly warm or cool individual users on demand. The system targets the most thermally sensitive parts of the body such as the face and head, the torso and feet, to provide warmth or cooling as needed and desired, rather than trying to maintain one temperature for an entire building or floor. “It’s even better than having a thermostat at every workstation, if that were possible,” said Edward Arens, Ph.D., Member ASHRAE, the project’s co-principal investigator. The PCS also will interface with smart phone apps, software, and sensors to relay building temperatures, weather forecasts, and thermal satisfaction responses to the people who make decisions about energy use in the building.

Demand for Commissioning Grows, According to Survey

Demand for the services of commissioning professionals is rising and will continue to rise into the near future, according to a survey by the Building Commissioning Association (BCA) and Portland Energy Conservation (PECD), a nonprofit that designs and manages energy-efficiency programs for utility providers and government organizations. Around 72% of respondents to the survey of attendees of the BCA’s National Conference on Building Commissioning have experienced more demand for new building commissioning services in the past year. Sixty-nine percent said have experienced more demand for existing building commissioning in the past year. “Green” building certifications were the most-cited motivator for commissioning. Corporate environmental goals were also cited as a key reason commissioning is growing in popularity.

ASHRAE Learning Institute

2013 Fall Online Course Series

2 WAYS TO REGISTER

Take 3 or more courses and save 15% off registration!

Internet: www.ashrae.org/onlinecourses

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

Note: You may register up to 24 hours prior to an online course. Courses are in US Eastern Time.

Complying with Standard 90.1-2010: HVAC/Mechanical
Mon, September 30, 2013 – 1:00 pm to 4:00 pm EDT

Energy Management in New & Existing Buildings
Wed, October 2, 2013 – 1:00 pm to 4:00 pm EDT

High-Performance Building Design: Applications & Future Trends
Wed, October 9, 2013 – 1:00 pm to 4:00 pm EDT

Commissioning for High-Performance Buildings
Wed, October 16, 2013 – 1:00 pm to 4:00 pm EDT

Fundamentals Requirements of Standard 62.1-2010
Mon, October 21, 2013 – 1:00 pm to 4:00 pm EDT

Air-to-Air Energy Recovery Fundamentals
Wed, October 23, 2013 – 1:00 pm to 4:00 pm EDT

Data Center Energy Efficiency
Mon, October 28, 2013 – 1:00 pm to 4:00 pm EDT

Air-to-Air Energy Recovery Applications: Best Practices
Wed, October 30, 2013 – 1:00 pm to 4:00 pm EDT

IAQ Best Practices for Design, Construction & Commissioning
Wed, November 13, 2013 – 1:00 pm to 4:00 pm EST

The following courses are comprised of two parts. Registrants must attend both parts in order to receive CEU/PDH credits.

Energy Modeling Best Practices & Applications
Part 1 - Mon, September 16, 2013 – 1:00 pm to 4:00 pm EDT
Part 2 - Mon, September 23, 2013 – 1:00 pm to 4:00 pm EDT



Commercial Building Energy Audits
Part 1 - Mon, November 4, 2013 – 1:00 pm to 4:00 pm EST
Part 2 - Wed, November 6, 2013 – 1:00 pm to 4:00 pm EST

HVAC Design Training

2 Courses, 5 Days of Intense Instruction

Oct 28 – Nov 1, 2013

HVAC Design: Level I - Essentials

ASHRAE's *HVAC Design: Level I - Essentials* provides intensive, practical training for HVAC designers and others involved in delivery of HVAC services. 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

ASHRAE's *HVAC Design: Level II - Applications* provides advanced instruction on HVAC system design for experienced HVAC designers and those who complete the *HVAC Design: Level I - Essentials* training. 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

Global Solar, Wind Growing Despite Shrinking Investments

Although hydropower remains the world's leading renewable energy, solar and wind continue to dominate investment in new renewable capacity and are quickly becoming the highest-profile renewable energy sources, according to Worldwatch Institute. Global use of solar and wind energy continued to grow significantly in 2012 even with declining investments (down 11 and 10 percent, respectively, from 2011). Solar power consumption increased by 58 percent to 93 TWh; wind power increased by 18 percent to 521 TWh. Global investment in solar energy in 2012 was \$140.4 billion; wind investment was \$80.3 billion, but due to lower costs for both technologies, total installed capacities grew sharply, according to WorldWatch.

Solar PV installed capacity grew by 41 percent in 2012 to 100 GW. Over the past five years alone, installed PV capacity grew by 900 percent from 10 GW in 2007. The countries with the most installed PV capacity are Germany (32.4 GW), Italy (16.4 GW), the United States (7.2 GW), and China (7.0 GW), according to WorldWatch.

The United States was the world's top wind market in 2012 with overall capacity increasing 28 percent, at which time, the U.S. added 13.1 GW -- double the amount it added in 2011. Increased domestic manufacturing of wind turbine parts, improved technological efficiency, and lower costs helped spur this increase, but the greatest catalyst was the threat of expiration of the federal Production Tax Credit which provides tax credits for kilowatt-hours produced by wind turbines, the research explains.

Philadelphia to Enforce Building Energy Benchmarking Law This Fall

The City of Philadelphia sent compliance notices regarding its Building Energy Benchmarking Law, which requires owners/operators of buildings with more than 50,000 square feet of indoor floor space (or mixed-use buildings where at least 50,000 square feet of indoor space is devoted to commercial use) to disclose annual energy usage and water consumption. The city's benchmarking law was signed in August 2012, and regulations were issued in July 2013. The compliance deadline for reporting building energy and water consumption will be October 31, and failure to comply will result in a fine.

To facilitate measurement and reporting of building energy usage, Philadelphia building owners and operators are required to use the EPA's free Portfolio Manager tool. Building data, such as age, size, type and use, are combined with utility consumption data to generate energy performance scores based on the building's performance relative to similar buildings nationwide. The building energy disclosures will be made available online.

The city of Philadelphia will collaborate with the Energy Efficient Buildings Hub (EEB Hub) on in-depth analysis of results to ensure data integrity. Penn State University created the EEB Hub at Philadelphia's Navy Yard. EEB Hub, which is sponsored by the Department of Energy, performs research to develop and integrate materials, technologies, models and tools to optimize whole building energy performance.

Philadelphia became the sixth city in the United States to require mandatory benchmarking in 2012, joining Austin, New York, San Francisco, Seattle and Washington DC. Since then, Minneapolis and Boston have passed similar laws. And Chicago Mayor Rahm Emanuel recently proposed an ordinance that would require the city's largest buildings to benchmark their energy use, and authorize the city to disclose the energy efficiency for these buildings publicly.

Since 2008, the number of Energy Star-certified buildings has more than doubled in Philadelphia, to 174 certified buildings. The Mayor's Office of Sustainability has already benchmarked more than 300 City-owned facilities and will issue a report later this year with the findings, which they will use to inform strategic investments. Philadelphia's Building Energy Benchmarking Law was passed as a key step in Mayor Nutter's Greenworks Plan. The benchmarking law is designed to reduce citywide building energy use by ten percent in 2015.

ASHRAE Certification Programs

ASHRAE has developed a 30-question Online Practice Exam for the Commissioning Process Management Professional (CPMP) certification. This Online Practice exam, available for \$39.00, is written to the same specifications as the actual exam and:

- familiarizes applicants with computer-based testing.
- offers a sense of how to time yourself during the actual exam.
- is taken in the privacy of your home, office, or on the road.
- has no application process and can be taken any time during the 30 days after purchase.
- provides a score report and feedback report to indicate weak areas.

Online Practice Exams are planned for all six ASHRAE certifications.

To access the CPMP practice exam, go to www.ashrae.org/CPMP.

Hot Products from ASHRAE

A leader in HVAC&R technology, ASHRAE publications cover topics that impact every facet of the environment, both indoors and out.

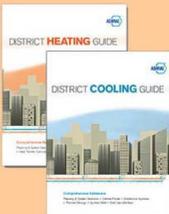
Now in One Place: Vital Data Center Guidance



Data Center Essentials: Guidance on Energy-Efficient Design and Operation assembles into one publication all the information needed to design, operate, and maintain energy-efficient data centers. This essential volume presents fundamental guidance from ASHRAE Technical Committee (TC) 9.9, the industry-recognized source for mission critical facilities.

\$289 (\$189 ASHRAE Member) / 1,060 pages / 2013

Comprehensive Coverage of All Aspects of District System Design



The *District Heating Guide* and *District Cooling Guide*, now bundled for one low price, fulfill a worldwide need for modern and complete design guidance for district systems. Expanded from the District Heating and Cooling chapter in the *2012 ASHRAE Handbook*, these guides provide in-depth coverage, additional topics, and case studies. The *District Heating and Cooling Guides* draw on the expertise of an extremely diverse international team with current involvement in the industry and hundreds of years of combined experience.

\$179 (\$152 ASHRAE Member) / Softcover Bundle / 2013

Visit www.ashrae.org/bookstore to learn more about these and other outstanding ASHRAE publications!

ASHRAE Awards First Innovative Research Grants

ASHRAE has awarded projects at Purdue University and Oklahoma State University with its newly created research grant, which provides funding for research having the potential to significantly advance the state-of-the-art in HVAC&R. The ASHRAE Innovative Research Grant carries a base grant of \$50,000 per year for two years, with an additional \$25,000 available in the third year if matched by an industrial contributor.

“Our goal with the new grant is to encourage more out-of-the-box research to complement the research proposed and guided now by ASHRAE technical committees,” T. Agami Reddi, chair of ASHRAE’s Research Administration Committee, said. “We see it as providing seed money to encourage ‘blue sky research’ that may otherwise not be funded initially through other means.”

Recipients are Lorenzo Cremaschi, Ph.D., associate professor, School of Mechanical and Aerospace Engineering, Oklahoma State University; and William Hutzal, P.E., professor, Mechanical Engineering Technology Department, Purdue University.

Cremaschi’s project, “Smart Nanolubricants for HVAC&R Systems,” focuses on nanoparticles with purposely different conductivity, size and shape. The research will advance the understanding of the interactions of the nanoparticles with refrigerant and lubricant flow boiling at the nano- and micro-scale levels, for which no previous studies exist. “This research opens a new frontier for nanotechnology applied to air conditioning and refrigeration systems,” Cremaschi said. “Driven by higher energy efficiency targets, there is critical need of major heat transfer enhancements in heat exchangers and nanolubricants, which are defined as nanoparticles suspended in high-viscosity suspensions, have the potential to address such need in a cost-neutral manner for both new and retrofitting residential air conditioning applications.”

Hutzal’s project, “Biowall Research,” will evaluate a biowall, which integrates plants with the return air of a residential or light commercial HVAC system to remove CO₂ and volatile organic compounds. Americans spend 90-95 percent of their time indoors where levels of pollutants may run 2 to 5 times, and occasionally more than 100 times, higher than outdoor levels, according to Hutzal. Many of these pollutants cause adverse health reactions in building occupants, which can contribute to lower worker productivity and increased sick leave. Traditional methods of indoor pollutant control in sealed buildings typically use some form of dilution ventilation using outdoor air. The outdoor air must be heated or cooled to meet indoor temperature and humidity requirements and represents a major thermal load of a building. “This research will demonstrate and evaluate a novel biofiltration system that improves indoor air quality and has the potential for decreasing overall energy use,” Hutzal said.

Join
ASHRAE
at its

2014 Winter Conference and AHR Expo in New York!

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.







Bi-State Chapter Officers and Governors 2013—2014

Position	First Name	Last Name	Email	Phone	Fax
Officers					
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BOG (term ends June 2016)	Michael	Circosta	mjcarmonk@optonline.net	(914) 273-9173	(914) 273-4097
BOG (term ends June 2016)	Dennis	LaVopa	dlavopa@dFlowTech.com	(845) 265-2828	(845) 265-2745
BOG (term ends June 2016)	Robert	Roston	bob@rostonfamily.com	(914) 761-3364	(203) 504-7949
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Refrigeration	John	Fusco	jfusco@olace.com	(914) 919-3178	(914) 747-0453
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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



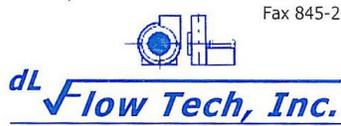
Walter E. Greenwood (Chip)
 PRESIDENT
 (914) 747-1007 Phone
 (914) 747-1054 Fax
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Employment Opportunities

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.

Installed Price of Solar PV Falling Rapidly

The installed price of solar photovoltaic (PV) power systems in the United States fell substantially in 2012 and through the first half of 2013, according to the latest edition of *Tracking the Sun*, an annual PV cost tracking report produced by the U.S. Department of Energy's Lawrence Berkeley National Laboratory. Installed prices for PV systems in 2012 fell by a range of roughly 6% to 14% from the prior year, depending on the size of the system, with commercial- and utility-scale installations experiencing the larger declines in price. "This marks the third year in a row of significant price reductions for PV systems in the U.S.," said Galen Barbose of Berkeley Lab's Environmental Energy Technologies Division, one of the report's coauthors. The report suggests that PV system price reductions in 2013 are on pace to match or exceed those seen in recent years.



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
October	10/21/2013	Research Promotion	Joint meeting with AIA Westchester at their Design Expo Event, Westchester Marriott	
November	11/13/2013	Sustainability	IBM Chiller Plant Tour (tentative)	
December	12/11/2013	Membership Promotion	Holiday Event (tentative)	
January	1/8/2014	Student Activities	Save the date	
January	1/18/2014 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	8/14/2014 through 8/16/2014		ASHRAE Region 1 2014 CRC hosted by Bi-State Chapter	

New Building Performance Database Launched by Energy Department

The Energy Department has launched the new Buildings Performance Database, the largest free, publicly available database of residential and commercial building energy performance information. This database will allow users to access energy performance data and perform statistical analyses on more than 60,000 commercial and residential buildings across the country, and new records are being added regularly. The database includes buildings’ location; age; size and function; electricity and fuel consumption; equipment information and operational characteristics. The data can also be used to compare performance trends among similar buildings, identify and prioritize cost-saving energy efficiency improvements, and assess the range of likely savings from these improvements. An application programming interface (API) will allow external software developers to incorporate analytical results from the database into their own tools and services.

The database tools have been designed to meet the content and usability needs of public agencies, building owners and managers, contractors, energy efficiency program administrators, and financial institutions, with over 1,000 users testing the site since March 2013. The Department hopes that public and private stakeholders will continue to submit data and expand the resource. All data is made anonymous and protected by stringent privacy and security protocols. The database was developed for the Department’s Building Technologies Office by Lawrence Berkeley National Laboratory and Building Energy Inc. Access the database at <https://bpd.lbl.gov>

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