

Ashrae Bistate Chapter

Volume XXIV, Issue I

Serving the Hudson Valley and Western Connecticut

September 2010

Upcoming Events

- October 13th -AERCO Factory Tour
- November I 0th -Bi-Polar Ionization
- December 8th
 Geothermal Presentation
- January 12th Computational Fluid Dynamics
 in HVAC Applications
- February 9th Save the date
- March 9th Save the date
- April 13th Save the date
- May I Ith -Save the date
- June 8th -Golf Outing

Inside this issue:

President's Message	2
Historical Notes	2
Programs Report	3
Officers and Governors Directory	5
Region I Executive Committee	6
Employment Ads & Sponsorship	7
Next Meeting Information	8

Meeting Wednesday September 15, 2010

Two PDH Credits

Presentation: Green Heating

John Ruhnke of JR's Comfortable Heat LLC, a design-build company specializing in the hydronic heating, will speak on different ways one can save on fuel costs for their space heating needs. Topics that will be addressed in the presentation include: solar-powered systems, geothermal heat pump systems, gas absorption heat pump units, co-generation, radiant heating, and the optimizing the energy efficiency of installed heating systems.

Tech Session: Coil Less & Water Saving Technologies for Instantaneous Water Heating Applications

Bob Barrett, CEM, LEED AP of Wallace Eannace Associates, an engineering sales office representing manufacturers of various hydronic equipment, will speak on instantaneous electric water heaters and how they can benefit projects that are pursuing LEED accreditation through solar hot water and hybrid heating systems.

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

Program: 5:30 - 6:00 PM Attitude Adjustment Time

6:00 Dinner 6:30 - 7:00 PM Tech Session 7:00 - 7:15 PM Coffee 7:15 - 9:00 PM Presentation

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.

Please make reservations by contacting either:

Nicholas Salomone nsalomone@olace.com 914-919-3140 Enzo Carlesimo ecarlesimo@collado-eng.com 914-332-7658

President's Message

By Enzo A. Carlesimo

I can remember the first time I went to a Board of Governors meeting. Steve LePorisz, who was Chapter Secretary at the time, had convinced me to attend so that I could vote for him as the President-Elect for the upcoming year. That night I did vote for Steve and surprisingly then-President Terry Connor asked me to be the Vice President. I was hesitant to say the least because I did not feel I was ready to assume a leadership role within the Chapter, but since Steve was going to be President -Elect, I figured we would be able to get through it together. That night I never thought I would be the Chapter President, but here I am today, so I am going to give it my best.

On behalf of the Chapter, I would like to extend my gratitude to Dennis Lavopa for all his efforts last year as President; fortunately, he has been kind enough to continue as Treasurer! Last year, we made impressive strides in the areas of Membership Promotion and Student Activities, and with the help of our new committee chairpersons, we should be able to build upon what we have achieved so far. Once again, it is a privilege for me to serve as the Chapter President and I look forward to an exciting year!



Enzo A. Carlesimo Bi-State Chapter President

Historical Notes — Bob Roston, Bistate Historian

When refrigeration began commercial development after the mid - 19th century, many components of systems were hand made. Refrigeration pioneer Charles Zilker recalled improvising when a steam coil was needed for an absorption refrigeration machine in the 1860's: "The coils were made out of 1 ¼ in., pipe. It was said that the first coil that was made, the engineer bored a hole in a tree and placed the end of the pipe in it, then wrapped the pipe around the tree. After he had the coil made, he had to cut the tree down to get the coil off."

—From Sixty Years Of Ice—A Brief Historical Resume Of The Pioneer Days Of The Artificial Ice Industry In Southern Texas, by Charles Zilker.

Workers Say 'Green' Buildings Increase Their Productivity

Workers who moved from conventional office buildings to environmentally friendly "green" buildings said they called in sick less often and were more productive, according to a study by a team of Michigan State University researchers. The study appears in the online version of the <u>American Journal of Public Health</u>.

The researchers, who looked at two case studies in the Lansing area, found that moving to LEED-certified buildings contributed to noticeable reductions in self-reported absenteeism and stress. It also improved the workers' productivity as a result of perceived improvements in health and well-being. "These preliminary findings indicate that green buildings may positively affect public health," the researchers write.

LEED, which stands for Leadership in Energy and Environmental Design, is a designation by the U.S. Green Building Council for buildings with environmentally friendly design, construction practices and operation.

The research team consists of Amanjeet Singh, a former MSU master's student; Matt Syal, professor of planning, design and construction; Sue Grady, assistant professor of geography; and Sinem Korkmaz, assistant professor of planning, design and construction. The researchers said they plan to continue seeking funds to monitor the study participants and also conduct similar studies at different sites.

Committee Reports

Programs

Nick Salomone, Chairman

The September meeting will feature Green Heating by John Ruhnke of JR's Comfortable Heat LLC as the main presentation. Topics that will be addressed in the presentation include: solar-powered systems, geothermal heat pump systems, gas absorption heat pump units, co-generation, radiant heating, and the optimizing the energy efficiency of installed heating systems. The Tech session will be Coil Less & Water Saving Technologies for Instantaneous Water Heating Applications by Bob Barrett, CEM, LEED AP of Wallace Eannace Associates, who will speak on how instantaneous electric water heaters can benefit projects that are pursuing LEED accreditation through solar hot water and hybrid heating systems.

Student Activities

Carmen B. Yellen

Student Activities is gearing up for an exciting year! We are happy to welcome back our motivated College student members, and are pleased to continue hosting any student to join us for our Dinner meetings.

These meetings offer technical presentations, are great opportunities to network with HVAC professionals, and all at no cost to the student!

Additionally, the benefits of student participation include scholarships, possible internships, and leadership opportunities thru student chapters.

Be a part of a society that *is* the leader of setting the standards for, energy savings, establishing the quality of our building environments, mechanical systems and new technologies as they are introduced to the markets.

This year, as a national ASHRAE objective, we will be reaching out to high school students as well. We are looking forward to building awareness in the minds of our future engineering generations. Contact me if you would like to participate or have ideas for science fair projects, senior engineering projects, college research projects, etc.

(email: cbyellen@arbpe.com
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Membership Promotion

Erica L. Ross, Chairman

Membership Promotion is taking on a new and exciting role for the 2010-2011 year. With a brand new website and both a Facebook and LinkedIn page, we will be able to promote the Bi-State Chapter in a whole new way. This technique is particularly useful in attracting the most recent graduates. As school is just about to start, we will aim our efforts at maintaining our relationship with Manhattan College in Riverdale. We also hope to develop the relationship with the engineering departments at SUNY Maritime and Fairfield University. We've integrated the website with our Facebook page in an effort to encourage new growth within the society on a local level. Society has set a new goal to grow by 3,000 net Members, Associates and Affiliates by June 30, 2011! The Bi-State is hoping to secure a percentage of new members to help reach that goal! Additionally, we already have a number of keynote speakers scheduled for the year. By promoting these speakers on our website we will without a doubt increase our exposure and meeting attendance in the coming year.

2010 ASHRAE Standard 62.1-2010, Ventilation for Acceptable Indoor Air Quality, Published

New requirements regarding natural ventilation, exhaust systems and the IAQ Procedure are included in the newly published 2010 version of Standard 62.1. ANSI/ASHRAE Standard 62.1-2010, *Ventilation for Acceptable Indoor Air Quality*, sets minimum ventilation rates and other requirements for commercial and institutional buildings.

"Since first being published in 1973, the standard has provided the basis for ventilation system design throughout the industry," Roger Hedrick, committee chair, said. "The 2010 standard furthers ASHRAE's work in ensuring acceptable indoor air quality, while also heeding the need for energy efficiency as we strive to find ways to help designers tailor ventilation system designs to each particular application."

Among the changes to the 2010 standard are modifications to the Natural Ventilation Rate Procedure, which now requires most buildings designed to meet the natural ventilation requirements also include a mechanical ventilation system designed to meet the Ventilation Rate or IAQ procedures. The mechanical system is to be used when windows are closed due to extreme outdoor temperatures, noise and security concerns.

"Most buildings using natural ventilation in the United States are high-rise residential buildings that often have no form of outdoor air intake other than operable windows," Hedrick said. "This results in buildings with inadequate ventilation, because occupants often leave the windows closed in order to run the air conditioning, keep out noise, etc. The committee felt it needed to strengthen the existing prescriptive requirements to ensure adequate ventilation and their corresponding IAQ benefits are available to occupants."

Another change relocates requirements related to exhaust systems to a new section, clarifying that exhaust requirements apply to all buildings regardless of the procedure used to determine outdoor air intake flow rates.

The IAQ procedure, which allows for the calculation of the amount of outdoor air necessary to maintain the levels of indoor air contaminants below recommended levels, has been made more robust by increasing requirements for using the "similar building" design approach and clarifying other requirements.

"The standard now contains, in informative Appendix B, a table of volatile organic compounds that designers might want to consider as possible contaminants of concern," Hedrick said. "To encourage designers to consider 'additivity' when applying the IAQ Procedure, some guidance from the American Conference of Governmental Industrial Hygienists has been included."

China, U.S. Pace the World in Renewable Energy Investments

New investment in clean energy technologies, companies, and projects held steady in the second quarter of 2010 at \$33.9bn as a drop in investment in European projects was offset by a continuing boom in China and a bounce-back in the US, according to new estimates from research firm Bloomberg New Energy Finance. The quarterly total represented just a 1.5% slip from first quarter 2010, a 3.0% fall from Q2 2009, and came despite the Greek credit crisis, poorly performing public markets, and a sluggish U.S. economic recovery.

"On a global level, the new numbers suggest that despite continuing worries about the macro-economy, investors remain relatively optimistic about clean energy's longer term prospects," said Bloomberg New Energy Finance chief executive Michael Liebreich. "However, where investors are placing their bets is changing rapidly. China continues its extraordinary surge and Europe is now very much slumping, based on the all-important project finance figures."

Bloomberg New Energy Finance tracks third party investment on a quarterly basis in three main categories – Asset Finance (funds provided for the construction of electricity- or biofuels-generating projects), Public Markets

(funds raised over the stock exchanges via IPO's and other offerings), and Venture Capital / Private Equity. The company also takes other forms of clean energy investment into account in its annual figures.

ASHRAE, NEMA Partner on Standard to Create Facility Smart Grid Model

Under a national Smart Grid effort, ASHRAE and the National Electrical Manufacturers Association (NEMA) are jointly developing a standard that would provide a common basis for electrical energy consumers to describe, manage and communicate about electrical energy consumptions and forecasts. A kickoff meeting to begin work on the proposed standard recently took place at ASHRAE Headquarters in Atlanta.

ASHRAE/NEMA Standard 201P, Facility Smart Grid Information Model, will define an object-oriented information model to enable appliances and control systems in homes, buildings and industrial facilities to manage electrical loads and generation sources in response to communication with a "smart" electrical grid and to communicate information about those electrical loads to utility and other electrical service providers.

"Smart grids lead to smart meters lead to smart systems," ASHRAE President Lynn G. Bellenger, P.E., said. "As the smart grid adjusts to suit load distribution and maintain power quality and reliability, one of the steps will be to communicate with building metering systems which, in turn, will communicate with building systems and equipment. This ties into demand response control to reduce peak demand. One day in the future, we likely will have real-time pricing with dramatic differences in power costs dependent upon the time of day or grid load."

"NEMA and the members of their smart grid and high-performance buildings councils see the creation of this standard as a strategic element in driving development of a nation-wide smart electrical grid while increasing energy efficiency, occupant productivity and cost-effectiveness in safe secure buildings," Jim Lewis, manager, High Performance Buildings, NEMA, said.

The standard is part of ASHRAE's supporting efforts for the Smart Grid Interoperability Panel, a public-private partnership initiated by the National Institute of Standards and Technology to speed development of interoperability and cyber security standards for a nationwide smart electric power grid. The proposed ASHRAE/NEMA standard will coordinate with work by the North American Energy Standards Board to develop a basic energy usage data model standard and create a facilities data model that provides additional energy usage data elements for commercial and industrial buildings. This includes lighting, heating, HVAC&R and other electrical loads.

Many Professionals Reluctant to Adopt Collaborative Design

Many building industry professionals believe an integrated process of working collaboratively as a team from the inception of a project has too many unknowns to adopt, according to a recent survey by architecture and engineering information firm ZweigWhite. Respondents to the survey said the lack of specific insurance protection products, no vetting in the courts, and the difficulty of assembling a group of people with a common goal are all impediments to integrated project delivery (IPD). However, some of the skeptics are willing to give IPD a try if they could find the right partners.

Officers and Governors 2010—2011

Position	First Name	Last Name	Email	Phone	Fax
Officers					
President	Enzo	Carlesimo	ecarlesimo@collado-eng.com	(914) 332-7658	(914) 332-7659
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Golf	Steven	Abbattista	sabbattista@olace.com	(914) 747-2800	(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."

ASHRAE Region I Roster

2010-11 Executive Committee

DRC - Director & Regional Chair

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HELP WANTED

Employment ads may be submitted for inclusion in the following month's issue of **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.

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





dLaVopa@dlflowtech.com



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800-685-7077 FAX: 212-685-4777 chimney design solutions.com



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PHONE: 914-592-1776 FAX: 914-592-1904 e mail: smacna.seny@verizon.net Westchester, Putnam, Rockland, Orange Ulster, Sullivan, Dutchess, Fairfield & Litchfield, Ct. The American Society of Heating, Refrigerating and Air-Conditioning Engineers advances the arts and sciences of heating, ventilation, air conditioning and refrigeration to serve humanity and promote a sustainable world. Membership is open to any person associated with the field including indoor air quality, building design and operation, and environmental control for food processing and industry.

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
September	9/15/2010	1st chapter meeting of the 2010-2011 year	Green Heating	Coill Less & Water Saving Technologies for Instantane- ous Water Heating Applica- tions
October	10/13/2010	Research Promotion	AERCO Factory Tour Northvale, NJ	
November	11/10/2010	Membership Promotion	Bi-Polar Ionization	
December	12/8/2010	Sustainability	John Bender—MSKW Geothermal Presentation	
January	1/12/2011	Student Activities	Computational Fluid Dynamics in HVAC Applications	
February	2/9/2011	Research Promotion		
March	3/9/2011	Membership Promotion		
April	4/13/2011	Sustainability		/
May	5/11/2011	Student Activities		
June	6/8/2011	Student Scholarships	Golf Outing	

Renewable Energy Benefits From Recovery Act Funding, Says Report

Renewable energy generation in the United States has benefited greatly from the federal stimulus bill's \$100 billion investment in energy innovation, according to a report released this week by U.S. Vice President Joe Biden. According to "The Recovery Act: Transforming the American Economy Through Innovation," the United States is now on track to achieve three major breakthroughs due to Recovery Act investments: cutting the cost of solar power in half by 2015; reducing the cost of batteries for electric vehicles by 70% between 2009 and 2015; and doubling U.S. renewable energy generation and renewable manufacturing capacity by 2012.

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