



THERMOGRAM



The New Jersey Chapter of ASHRAE Newsletter

www.njashrae.com

March 2009

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ASHRAE
Engineering
for
Sustainability

NJ Chapter of ASHRAE Meeting

Tuesday, April 7, 2009

at

Woodbridge Hotel & Conference Center

(formerly Sheraton)

515 Route 1 South & Gill Lane, Iselin, NJ



*How Do We Get Carbon
Neutral Buildings by 2030?*

Presented by

Erv Bales, PhD

Research Professor, NJIT

Cost: \$50.00 Members
\$55.00 Non-members
\$ 5.00 Students

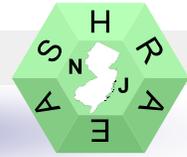
RSVP: REPLY@NJASHRAE.COM or call 732-218-7463
By April 3rd, 2009

4:30 Board of Governors Meeting
5:30 Dinner and Presentation Speaker

Upcoming Event

NJ ASHRAE presents Distinguished Lecturer Julian de Bullet
Technical Lecture on April 29th, 2009— Details on page 6

Region 1 CRC Invite - Details on page 3



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CTTC — TEGA

John Tellefsen
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Historian

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Honors & Awards

Jeffrey Grant
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Open

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Research/Promotion

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Scholarships

Russ Graham
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Seminars

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Special Events/ Golf Outing

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Student Activities

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Technical Sessions

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Calendar of Upcoming Meetings



MAY 5, 2009

Scholarship Award Night & Installation of Officers

Dinner Session: "Win-Win Negotiating Skills" presented by
Mr. Barry Benator P.E., CEM, Benetech Inc,
ASHRAE Distinguished Lecturer

JUNE 2, 2009 Spouses Night—Event TBA

Do you have a topic of interest that you would like to present at a NJ ASHRAE meeting?
Presentations of a non-commercial nature are always welcomed. Contact any chapter officer or committee chairperson for more information.



President's Message

Dear Chapter Members,

Our March 3rd dinner meeting was well attended and included a presentation by Mr. Robert Hedinger Esq, Principal at Hedinger and Lawless LLC. The presentation centered on New Jersey Construction Law and included precedence and case studies of construction law statutes pertinent to both design professionals and contractors. The presentation was very informative and included a bound summary of these statutes for future reference. I would like to thank Mr. Hedinger for his pointed presentation and clarity of the issues facing the construction industry.

Next month we will be switching gears back to Sustainability as we have a presentation by Mr. Erv Bales, a Professor at New Jersey Institute of Technology. Mr. Bales will be presenting on renewable energy systems, such as photovoltaics, solar, and wind power.

I hope to see you at our next meeting.

Mark

Region 1 CRC— Invite from Garry Myers, Region I DRC

Greetings fellow ASHRAE Region I members. The annual Chapter's Regional Conference (CRC) is where the membership meets ASHRAE society. Chapters give their annual reports, the Regional officers present update on their committee activities, and motions for change are brought forward and acted upon. This year the Region I CRC will be held in Albany, New York and is hosted by the Northeast Chapter. The conference kicks off on Thursday, August 27th.and concludes on Saturday the 29th.

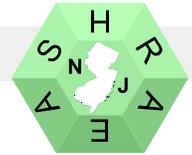
As this is two weeks earlier than usual, I thought I would get the official flyer to you early to facilitate your planning. The CRC '09 committee has been working hard for two years planning this event and has a lot to offer. Please mark your calendar and join us for this exciting event.

- Garry Myers

Visit www.ashraeregion1.org website for additional information and event registration form

2008-2009 Presidential Award of Excellence (PAOE) Summary

Chapter #	Chapter Name	Chapter Members/ students	Member Promotion	Student Activities	Research Promotion	CTTC	History	Chapter Operations	Chapter PAOE Totals
007	N.J.	787	425	1015	290	770	225	580	3305



April Dinner Menu

Tossed Garden Salad

Chicken Marsala

Vegetables & Potatoes

German Chocolate Cake

Iced Tea, Coffee, Hot Tea

*Vegetarian entrée also available



Speaker Bio : Erv Bales, Ph.D.

Erv Bales, initiator of the NJ School of Architecture at NJIT Certificate Program in Sustainable Design, was a Senior Research Consultant to the U.S. Environmental Protection Agency, where he helped start the Energy Star Homes program. He managed the Building Systems Branch of the U.S. Dept. of Energy for three years. Erv has taught energy design of buildings at the NJIT for twenty five years. Erv holds a Ph.D. in Mechanical Engineering from the University of Illinois.

Erv's talk is entitled, "How do we get carbon neutral buildings by 2030?"

The 2030 challenge has been issued and ASHRAE with the federal government, AIA, the Conference of Mayors and other organizations have accepted. The challenge is to build only carbon neutral building in the year 2030. We will discuss the nonrenewable technology necessary to meet the Challenge and your role.

Green ASHRAE News: ASHRAE/AIRAH Issue Joint Resolution on Climate Change

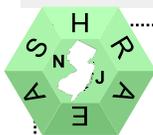
Use of renewable energy, education of the building industry and responsible refrigerant use are encouraged in a new joint statement on climate change issue by ASHRAE and the Australian Institute of Refrigeration Air Conditioning and Heating (AIRAH).

"The use of HVAC&R technologies is an essential element of contemporary life," Bill Harrison, ASHRAE president, said. "Yet, HVAC&R systems contribute to greenhouse gas releases through energy-related effects and through the effects of refrigerant losses. ASHRAE and AIRAH are emphasizing a variety of measures to decrease emissions associated with energy use and its effect on global climate."

"I see this joint statement as an acknowledgement of the role we affiliated organizations must play to address the complex challenges we collectively face," John Bosci, AIRAH president, said. "AIRAH is committed to creating awareness and acceptance through further education and to the promotion of sustainable building practices and the responsible development of alternative technologies within the Australian market."

By signing the statement, ASHRAE and AIRAH resolve to:

- Support research and development activities designed to reduce buildings' energy use and greenhouse gas emissions
- Educate building owners, operators, users, designers, and constructors on the importance of building energy efficiency, corresponding climate change impact, and proper operations and maintenance measures
- Encourage the supply of renewable energy into buildings and building engineering systems when economically feasible
- Develop and implement sustainable building designs, materials, components, systems, and processes that minimize environmental impacts, including climate change, while maintaining indoor environmental quality
- Provide advice, information, and assistance to governments and other influential bodies on energy efficiency and climate change emissions in both new and existing buildings
- Encourage responsible refrigerant use, including emissions reduction strategies and technologies and encourage development of energy efficient refrigerants with low or zero global warming potential
- Support the development and implementation of standards, building codes, incentive programs, and voluntary initiatives aimed at reducing building environmental impacts
- Implement holistic and coordinated approaches to identifying and resolving environmental issues at all stages of a building's life cycle—from conception, design, and construction through operation, maintenance, refurbishment, and deconstruction.



NJ ASHRAE presents Julian deBullet Technical One Day Workshop Wednesday April 29, 2009

Julian R. deBullet, ASHRAE Distinguished Lecturer
Technical Workshop Program Schedule

- 8:30–9:15 am Registration and Continental Breakfast
- 9:15–10:15 am Energy Analysis - Option or Necessity?
- 10:15–10:30 Break
- 10:30– 11:30 Condenser Water Heat Recovery
- 11:30–12:15 pm - Complimentary Lunch
- 12:15–1:15 pm Variable Primary Chilled Water Flow Systems
- 1:15–1:30 Break
- 1:30–2:30 pm High Performance Chilled Water Design
- 2:30 pm End

Price of \$95 includes lunch (walk-ins \$110)

Please book early, class size is limited to 25 attendees
Workshop is being held at JCP&L Red Bank Facility—directions on next page

Name _____ Phone Number: _____

Company Name _____

Email address _____

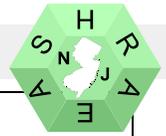
RSVP to reply@njashrae.com no later than April 24th

JULIAN R. DE BULLET Biography

Julian R. de Bullet has over 30 years experience in the HVAC industry. His career has concentrated on the applied use of Chilled Water and All-Air systems as a manager of applied equipment sales and as a manager of a service/performance contracting operation.

Mr. de Bullet the Director of Industry Relations for McQuay International, based in Washington D.C. He is responsible for assisting McQuay customers and McQuay sales representatives in HVAC&R system design and specification. He is a member of numerous industry associations concentrating on energy efficiency and responsible refrigerant use.

As ASHRAE Vice President (2001/2003), he served on the Board of Directors and the Executive Committee and was Chair of Member Council and Publishing Council. He is Past President of the National Capital Chapter and was Director and Regional Chair for ASHRAE Region III. He is an ASHRAE Distinguished Lecturer. He chaired the Professional Development Committee and is a member of the Programs and Education Council and the Society Advocacy Committee.



Directions to JCP&L - Red Bank Facility

One River Center - Building 3
331 Newman Springs Rd., Red Bank, NJ 07701

Directions from North Jersey:

Take Parkway South to Exit 109 (Red Bank / Lincroft). Pay toll and get in the CENTER Lane before the light. Turn LEFT (heading East) onto Newman Springs Road. Get into the RIGHT hand lane. Travel UNDER the Parkway.

First light is for Half Mile Road, go straight through this light.
500 feet later is another light for the driveway into the Mack Cali Office building campus.
Second light is for the office building campus driveway. Turn RIGHT at this light onto the driveway.

****Go approx. 200 ft to the first driveway on your right. Turn into this driveway / parking lot.**
This is Building 3, Main entrance / lobby to Building 3 is all the way down at the end of the driveway.
Parking is tight, and you may have to park and walk a distance to get into the building.

Once you enter through the main entrance into the lobby, DO NOT CHECK IN WITH THE GUARD.
Take elevator to 3rd Floor, turn right and walk around to the open set of JCP&L glass doors across the atrium from the elevator bank.

Directions from South Jersey:

Take Parkway North to Exit 109 (Red Bank / Lincroft).

Stay in right lane and head East, merging onto Newman Springs Road.
DO NOT CHANGE LANES. Stay in right lane only.

After merging, turn Right at the first light. This is the entrance driveway into the office building campus.
Follow directions above starting with *****Go approx. 200 ft...."**



ASHRAE Launches Commissioning Certification Program

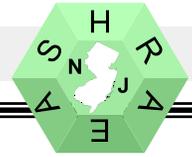
Just as the commissioning process helps buildings and their systems operate optimally, ASHRAE's newest certification recognizes those with optimal knowledge of the entire building commissioning process. The program is ideal for individuals given a commissioning role who may not have a building HVAC&R background.

ASHRAE's Commissioning Process Management Professional launches in June at the Society's 2009 Annual Conference in Louisville, Ky. The program helps building owners, developers, operators and others recognize individuals capable of assuring that building systems and equipment are designed, installed, tested, operated and maintained according to their operational needs.

"As the standard setter for sustainable building performance, ASHRAE's certification program recognizes that people who manage the commissioning process need to have people- and project-management skills in addition to a level of understanding of building design, construction, operations and maintenance," Bill Harrison, ASHRAE president, said. "This is what distinguishes the commissioning program from other HVAC commissioning certifications."

Developed with input from APPA, BCA, IESNA, NEBB, SMACNA, TABB and the University of Wisconsin-Madison, the program is the fourth in ASHRAE's suite of certification offerings. The others focus on healthcare design, high-performance building design, and operation and maintenance.

Individuals must meet certain eligibility qualifications to take the exam. For more information, an exam content outline and available resources for exam preparation, please visit www.ashrae.org/certification. The fee for the exam is \$207.50 before June 5 (\$147, ASHRAE members).



Ruth Giacobbe

Ruth Giacobbe passed away on March 11, 2009. She was the first female to be elected New Jersey Chapter president, which was over 15 years ago, and was for many years a very active ASHRAE member. Ruth was a familiar figure at CRC's, Winter and Summer meetings along with Joe, her husband of over 50 years.

I interviewed her a few years ago for a Thermogram article and I combined the highlights from that interview and my personal thoughts about Ruth.

Ruth's road into HVAC surprised me. "My daughter Donna started high school and I was tired of sewing. Ruth told me she did dress making and taught in the adult school. She decided to go back to work and to school and earned a business degree. In 1978, she took a position with a mechanical contractor who did design/build projects. At that time, she became very interested in HVAC. Middlesex County College was offering HVAC Technology, with credits. Ruth changed her courses and went to school three nights a week at two different buildings in different towns for two years while working full time. She finished with a degree in liberal arts. "The HVAC instructor was an interesting man named Joe Penesi. He was a short, stout, Italian who was knowledgeable and very opinionated." (Ruth's words not mine) and he received his PE without ever going to college. He served in WW II in Burma and swore he would never be hot again. He was very much an ASHRAE member and was once a NY Chapter president. He pushed all his students to join ASHRAE as student members and encouraged Ruth to become a full member. He held student chapter meetings at lunch time and even provided lunch. The program was excellent due to his dedication as an instructor. Lou Kelter was a guest speaker at the school. When Joe Penesi left the college, the program collapsed.

Ruth served on just about every chapter committee. She was chapter administrator for several years. I often sought her counsel on my ideas when I was an officer. She was normally blunt, "Bob that is a dumb idea." I always followed her advice. Other past presidents felt comfortable not only asking her opinion, but valued it as well. She was also active on the regional and the Society level. She served on Nominating, Meetings and Arrangements, Host Committee for the Atlantic City Winter Meeting and Women in ASHRAE. She went to her first CRC when the Kelters asked her to join them at Twin Tiers. Many of us felt like CRC's, Winter and Summer Meetings were family gatherings. At cities across the northeast as well as cross country we always had time for a dinner and laughs. It was a way to combine business with pleasure.

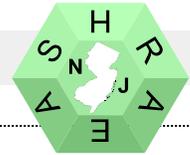
"Students today say they are interested in the environment but do not realize that HVAC sets our environment. It's not just about cleaning up rivers and saving trees." She felt she had accomplishments. While Chapter president, she announced that she wanted to started a scholarship fund. It was started during her term with \$2500. That fund has grown to more than ten times the original value. Ruth began a list of permanent motions and the Society began to require all chapters to have similar plans. She put together the first Directory of Products and Services. Ruth led the way for other women in ASHRAE.

She expressed that at times she was disappointed with ASHRAE. One concern of her's was the lack of interest by the membership and secondly that the committee for Women in ASHRAE committee had no follow up.

She recently told me "I now spend as much time as possible with my new grandson. He is a wonderful addition to my family. Just ask me and I will bring out the photos and a short video. Ruth said, In a way many ASHRAE members are also part of my extended family. The key to my joining was the encouragement of a single member, the late Joe Penesi. I believe that I have and will continue to work with ASHRAE members to enjoy the level of accomplishment that I feel."

Her smile, deep concern for others, and hearty laugh will be missed by the chapter.

Bob Daly
Chapter Historian



March NJ ASHRAE Dinner Meeting



What do the folks in these pictures know that you don't? They know when a construction lien can be filed (only for the unpaid, adjusted balance due on a written contract). They also know what happens when you choose arbitration over mediation and you don't like the decision.

Attendees to NJ ASHRAE March's dinner meeting learned about these topics and much more from Robert Hedinger's, presentation of "New Jersey Construction Law Recent Developments and Current Trends." The topics discussed included the Prompt Payment Act, New Jersey's Construction Lien Law, Arbitration/Mediation—New Legislation and Review Standards, Affidavit of Merit Requirement, Liability for Job Site Safety, "No Damage for Delay" in New Jersey, New Jersey's Municipal Mechanics' Lien Law and Bond Act and the Statutes of Limitation and Repose.

DOE: 90.1-2004 Saves Energy, States Must Meet or Exceed

As required by the Energy Conservation and Production Act, DOE has determined that ANSI/ASHRAE/IESNA Standard 90.1-2004 would achieve greater energy efficiency in buildings subject to the code than the 1999 edition. The quantitative analysis of the energy consumption of buildings built to Standard 90.1-2004, as compared with buildings built to Standard 90.1-1999, indicates national source energy savings of approximately 13.9 percent of commercial building energy consumption. Site energy savings are estimated to be approximately 11.9 percent.

As a result of this positive determination regarding Standard 90.1-2004, each State is required to certify that it has reviewed the provisions of its commercial building code regarding energy efficiency, and updated, as necessary, its code to meet or exceed Standard 90.1-2004. State certifications or requests for extensions are required on or before December 30, 2010.

For more information, see the Federal Register Notice (73 FR 79868 at <http://www.gpoaccess.gov/fr>



**THE NORTHEAST CHAPTER WELCOMES THE
ASHRAE REGION I DELEGATES/ALTERNATES AND REGIONAL
EXECUTIVE COMMITTEE TO A**



**HISTORIC WALKING TOUR OF OLD ALBANY AND DINNER
AT THE ALBANY PUMP STATION
Friday April 3, 2009**

Please join us for a short walking tour of Albany hosted by noted local historian Peter Keyoskey followed by dinner at our city's foremost microbrewery – **The Albany Pump Station** on **Friday April 3, 2009**. Delegates/Alternates from Region I ASHRAE chapters and the Region I Executive Committee and guests are invited to stretch their legs and join Northeast Chapter members in a great outdoor activity followed by a delicious dinner with beverage.

The city of Albany has an interesting and diverse history going back over 300 years, from Dutch trading post, fort and later English Colonial City. The walking tour will be approximately one hour from 5:30-6:30pm including various stops at historically significant buildings and monuments. Tour starts at Quackenbush Square in front of Nicholes Restaurant, right next door to the Pump Station.

The Albany Pump Station has its own unique history. The entire structure was completed and put into service in 1895. The Pump Station drew water from the Hudson River and pumped it under Clinton Avenue to Bleecker Reservoir, which is now Bleecker Stadium. In 1927 the pump station moved over 7 billion gallons of water. In 1932 the Alcove reservoir was put into service and the Pump Station ceased operation. The C.H. Evans family purchased the pump station and renovated it into a world class microbrewery and restaurant in 1999. The Pump Station has won many Gold Medals at the Great American Beer Festival for an American Brown Ale by the name of "Kick-Ass Brown". They have many other great brews on tap, with excellent food.

Come join us down by the river for a great time! Members are encouraged to bring their spouse, significant other, etc. We will enjoy a delicious buffet dinner. Meal includes unlimited soda, coffee and tea, Caesar Salad and bread, roasted red potatoes, vegetables, special dessert, and two hour beer/wine open bar.

SCHEDULE

5:30-6:30 pm - Walking tour of historic downtown Albany

6:30-7:00 pm - Cocktails

7:00-8:30 pm - Dinner

MENU

Roasted Pork Loin with Apple Cider Glaze- Oven roasted pork loin with a NY apple cider glaze.

Filet of Sole with Crabmeat- Fresh filet of sole stuffed with delicious crabmeat.

Chicken Portobello - Grilled chicken breast topped with Portobello mushrooms and fresh mozzarella.

HOW TO GET THERE

The Albany Pump Station (518.447.9000) is located at 19 Quackenbush Square in beautiful downtown Albany, NY, next to the Progressive Insurance Building.

PARKING

Parking is free at the Pump Station parking lot.

RESERVATIONS

This event was very popular last time. Reservations will be required. Respond back via Fax or E-mail with name of guests to Garry Meyers Fax: 212.689.7489, E-mail: garry.meyers@wspfk.com Please indicate if you are a Region 1 Excom member. Space will be limited so reserve early!

COST

Cost is free for Region 1 Excom members, \$48 for spouses/significant others, guests. Make checks payable to **ASHRAE- Region I Fund**, please bring with you.

See you there!



SOCIETY NEWS



ASHRAE Rolls into Louisville for 2009 Annual Conference

The pounding hoof beats into the final turn. Ice tinkles in the glass of a frosted mint julep. The plaintive echoes of rivercraft are heard as they signal the drawbridge. These are the sights and sounds of Louisville...the home of ASHRAE's 2009 Annual Conference.

"*Rolling on the River* serves as the conference theme and echoes ASHRAE's mission," Bill Harrison, ASHRAE president, said. "A steady flow of rapidly advancing standards and research, both complimented by our technical and educational program, will enhance ASHRAE's ability to drive the ongoing transformation to a more sustainable built environment."

The ASHRAE Annual Conference takes place June 20-24. To register or for more information, visit www.ashrae.org/louisville. Most events take place at the waterfront Galt House Hotel.

The ASHRAE technical program, with nearly 100 sessions, focuses on optimal indoor air quality. It begins Sunday, June 21, and ends Wednesday, June 24, with all sessions at the Galt House. Complete program details will soon be available at www.ashrae.org/louisville. The technical program features a large building systems track that begins with an introduction to large buildings and addresses sustainable large building design, energy modeling, smoke control and specifically indoor sports facilities, entertainment venues, and museums and libraries. Other tracks with multiple programs include systems and equipment, indoor air quality, exergy and sustainability.

The conference keynote speaker is Susan Roaf, professor of architectural engineering at Heriot Watt University, Edinburgh. Roaf's thought-provoking comments include a range of building- and climate-related risks that individuals will face in the future along with a range of actions that homeowners and legislators can take to future-proof lifestyles against the growing challenges of the 21st century. She speaks at the Plenary Session on Saturday and the technical plenary on Sunday.

The ASHRAE Learning Institute offers two full-day professional development seminars and four half-day short courses, focusing on a range of HVAC&R related topics. New sessions include *Data Center Energy Efficiency* and *Air-to-Air Energy Recovery Systems*. ASHRAE's Standard 90.1 course has been revamped to focus on using the standard to meet LEED and federal tax credit requirements.

ASHRAE also launches its newest certification program - Commissioning Process Management Professional. The certification recognizes that those who manage the commissioning process need to have people- and project-management skills in addition to knowledge of building design, construction, operations and maintenance. For more information, visit www.ashrae.org/cmpm.

ASHRAE technical tours offer an inside view of how technology developed by members is practically applied in building environments. Tours include the central steam and chilled water plant at Louisville Medical Center, an HVAC system for a Class 100/1000 cleanroom at the University of Louisville, the CMTA Corporate Headquarters Building, and the Scribner Place YMCA and Aquatic Center.

In addition, ASHRAE President-Elect Gordon Holness, P.E., Fellow ASHRAE, Life Member, a consulting engineer and chairman emeritus, Albert Kahn Associates Inc., Detroit, Mich., takes office as 2008-09 president. Holness presents his inaugural address at the president's luncheon on Monday, June 22, focused on energy efficiency in existing buildings.



SOCIETY NEWS

ASHRAE Position Document Outlines Commitment to Natural Refrigerants

In a new position document, ASHRAE outlines its support for research, assessment and strategic growth in the use of natural refrigerants such as ammonia, carbon dioxide, hydrocarbons, air and water in refrigeration systems and technologies.

ASHRAE's Position Document on Natural Refrigerants can be read at www.ashrae.org/positiondocuments.

As the industry searches for alternatives that have low global-warming potential, natural refrigerants are gaining increased interest. These refrigerants offer the potential to improve the environmental performance of refrigeration systems, according to ASHRAE.

"In light of the current global scenario, ASHRAE's response to the demand for environmental sustainability is to promote the development of systems that use natural refrigerants, safely, economically and efficiently," Bill Harrison, ASHRAE president, said.

With this position document, ASHRAE demonstrates its commitment to:

- the application of natural refrigerants
- the development of strategic relationships to advance natural refrigerants
- the consideration of natural refrigerants in existing and new guidelines, codes and standards
- the provision of guidance and education to policy makers and the public
- the creation and dissemination of methods and tools for environmental assessment of refrigeration systems
- the publication of technical information highlighting best practices from a safety, reliability and efficiency standpoint
- the promotion of authoritative information on natural refrigerants through seminars and publications

ASHRAE Leads Formation of High-Performance Building Partnership

ASHRAE, along with nine other leading organizations, is forming a consortium in response to the U.S. Department of Energy request for consortia to advise the department on high-performance building issues. The High-Performance Commercial Green Building Partnership (HPCGBP) brings together leading organizations from all aspects of the building community to provide guidance and technical leadership on key sustainability issues to the Department of Energy's Building Technologies Program.

The partnership intends to be recognized as a "Partnership Consortium" by the Department of Energy as requested in response to the Energy Independence and Security Act of 2007 Section 421. Section 421 is part of the formation of the Net-Zero Commercial Building Initiative which is intended to develop a research, development, and deployment strategy toward achieving net zero energy commercial buildings.

For more information on the Partnership, visit <http://www.hpcgbp.org>.



SOCIETY NEWS

EPA Designates ODS Substitutes



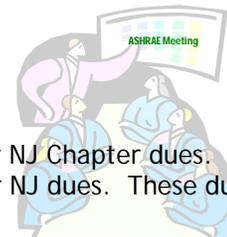
The EPA Determination of Acceptability for ozone depleting substances under the U.S. Environmental Protection Agency's (EPA) Significant New Alternatives Policy (SNAP) program. The determinations concern new substitutes for use in the refrigeration and air conditioning, fire suppression and explosion protection, and foam blowing sectors.

- R-407A [R-32/125/134a (20.0/40.0/40.0)] is acceptable for use in new and retrofit equipment as a substitute for hydrochlorofluorocarbon (HCFC)-22 and HCFC blends including, but not limited to, R-401A, R-401B, R-402A, and R-402B in: Retail food refrigeration; Cold storage warehouses; Refrigerated transport; Residential and light commercial air conditioning and heat pumps.
- KDD6 is acceptable for use in new and retrofit equipment as a substitute for CFC-12 in: Chillers (screw, reciprocating); Industrial process refrigeration; Industrial process air conditioning; Retail food refrigeration; Cold storage warehouses; Refrigerated transport; Commercial ice machines; Ice skating rinks; Household refrigerators and freezers; Vending machines; Water coolers; Residential dehumidifiers; Residential and light commercial air conditioning and heat pumps; Non-mechanical heat transfer.
- R-427A [R-32/125/143a/134a (15.0/25.0/10.0/50.0)] is acceptable for use in retrofit equipment as a substitute for HCFC-22 in: Retail food refrigeration; Industrial process air conditioning; Reciprocating chillers; Screw chillers; Household refrigerators and freezers; Residential and light commercial air conditioning and heat pumps; Motor vehicle air conditioning (buses and passenger trains only).
- R-424A [R-125/134a/600a/600/601a (50.5/47.0/0.9/1.0/0.6)] is acceptable for use in new and retrofit equipment as a substitute for HCFC-22 in motor vehicle air conditioning (buses and passenger trains only).
- R-434A [R-125/143a/134a/600a (63.2/18.0/16.0/2.8)] is acceptable for use in new and retrofit equipment as a substitute for HCFC-22 in motor vehicle air conditioning (buses and passenger trains only).



Please remember your NJ Chapter Dues

When you pay your ASHRAE Society Dues, there is a separate line item for your NJ Chapter dues. Please be sure to check off the chapter dues box and include payment for your NJ dues. These dues provide the operating budget for the Chapter.





SOCIETY NEWS

ASHRAE Grant

Plugged In! Experience Seeks to Raise Awareness on Plug Loads

From computers to popcorn poppers to hair dryers, energy use in dormitories often runs rampant due an overload of appliances.

To help students gain a better understanding of how being plugged in impacts building energy use, ASHRAE is funding a teaching project for students at the University of Oregon.

The students will be challenged to develop a better understanding of personal and broad-scale energy consumption and how appliance selection and behavior modification can impact energy use through a hands-on experience, known as Plugged In!. The project was one of 13 grants funded by ASHRAE through its senior undergraduate project grant program.

The grants, totaling some \$65,000, are awarded by ASHRAE to colleges and universities worldwide to promote the study and teaching of HVAC&R, encouraging undergraduate students to pursue related careers. The grants are used to design and construct projects. For more information, visit ASHRAE.org/studentzone.

As part of Plugged In!, students will “shop” for electrical appliances, determine the plug loads of each appliance and calculate their short-term and long-term energy implications. They also will develop a real-time monitoring and feedback loop of a dormitory, as part of their goal of modifying occupant behavior. The students will develop a Web interface using energy use animations to reflect the amount of actual energy use of the dorm.

“Students living in dorms across campus will see first-hand how their behavior impacts building energy use and how energy use impacts the environment,” said professor Alison Kwok. “Estimates show that plug loads can range from 10 to 25 percent of total building energy use. We want to show our students how energy use can influence decisions about building design and how their use of appliances can impact power use for the entire campus.”

Other ASHRAE grant recipients are:

- University of Colorado at Boulder, *Developing a Low-Cost Modular Building Integrated Photovoltaic-Thermal Collector for Electricity, Hot Water and Pre-heated Ventilation Air*
- Purdue University (team 1), *Heat Recovery Demonstrators*
- University of Central Florida, *Design Optimization of a Solar Thermal System with Integrated storage*
- Lawrence Technological University, *Monitor and Simulate Two Existing, High Performance Buildings to Achieve and Maintain Sustainable Operation*
- Boise State University, *Solar Collector Panel Test Stand Senior Design Team*
- The University of Kansas, *Working Model of a Tall Building's HVAC&R Systems*
- Florida International University, *GSHP-Solar*
- University of Alabama at Birmingham, *Variable Speed Pumping System*
- Cairo University, *Solar Hydrogen Fuel Cell Water Heater Educational Stand - Design and Fabrication*
- University of Washington - Seattle, *Assessing the Natural Ventilation in Classrooms and Laboratories—Implementing Class Projects*
- San Francisco State University (SFSU), *Air Conditioning Laboratory Unit for Undergraduate Engineering Education*
- University of Illinois at Urbana-Champaign, *Design and Construction of a Solar PV Demonstration System for Laboratory Use and Public Education*

If you would like to submit project or technical articles for the *THERMOGRAM*, please contact Jori Fahrenfeld @ 609-520-1600 or via email Jori.Fahrenfeld@Emerson.com for further details.



ASHRAE Government Affairs Update

DOE to Expedite Disbursement of Funds Received via Stimulus Act

Energy Secretary Steven Chu has announced a sweeping restructuring of DOE's processes for issuing direct loans, loan guarantees, and other funds to expedite the disbursement of the DOE funds received via the American Recovery and Reinvestment Act (ARRA). DOE will streamline and simplify loan application forms and other paperwork and will begin reviewing applications as they are received, rather than waiting until an application deadline. DOE will also add additional staff and resources to process the applications, allowing the agency to begin offering loan guarantees under the existing DOE Loan Guarantee Program by late April or early May. DOE will begin offering loan guarantees established by the ARRA by early summer and plans to disburse 70% of the ARRA funds by the end of 2010.

DOE will also establish a Web site to increase transparency in both the process and the results. The Obama administration has also established the [Recovery.gov](http://www.recovery.gov) Web site to track the overall spending of the ARRA funds. See the DOE press release (<http://www.energy.gov/news2009/6934.htm>).

DOE Issues Notice of Intent for Data Center Energy Efficiency Funding

Under funding from the American Recovery and Reinvestment Act, the U.S. Department of Energy Industrial Technologies Program (ITP) has released a Notice of Intent for an upcoming cost-shared solicitation that seeks to increase the energy efficiency of server-based telecommunications and data center facilities. ITP plans to release the solicitation in March 2009. Potential applicants should prepare to apply for this funding opportunity once it is released by completing the pre-registration process outlined in this article.

The purpose of the "Information and Communication Facility Energy Efficiency" funding opportunity is to promote R&D of innovative technologies that increase the energy efficiency of server-based information and communication technology (ICT) systems found in the nation's data centers and in telecommunications central offices. The solicitation seeks proposals for projects that increase the efficiency of IT equipment and software, power systems, and cooling systems. In addition, the solicitation will fund the demonstration and field test of pre-commercial technologies in these areas as well as in distributed generation or alternative power technologies used to power ICT systems.

For details, see the DOE press release (http://apps1.eere.energy.gov/news/progress_alerts.cfm/pa_id=151)

Joint Meeting NJ ASPE and The Engineers' Club

Thursday, April 16, 2009 5:30 to 8:30 PM
 Dominic's 453 Avenel Street, Avenel, NJ

Roundtable Discussion: Enforcing NJ State's Backflow Preventer Inspection Regulations

\$30 Payable by check to NJASPE (pay at door)

5:30 Social Hour (Beer and Wine provided) followed by served dinner and roundtable

Panel Members:

- Nick Azmo, Certified Backflor Tester
- Rich Clemente, VP Sales, Watts
- Dominic Demico, Plumbing Inspector
- Jim Garrell, Convoy & Griese
- Richard Wagner, PE, Kruse & Associates
- Tom Walsh, Plumbing Inspector

Moderator: David Quinlan, CPD

Contact: Bob Copeland, Cullen Associates, 732-988-9600, cullenpumps@aol.com



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HELP WANTED

MECHANICAL ENGINEER (HVAC)

The Port Authority of New York & New Jersey is a bistate public agency responsible for promoting transportation and commerce, operating some of the busiest and most important transportation links in the region including bridges, tunnels, bus terminals, airports, PATH, AirTrain systems, and the NY/NJ seaport.

The Port Authority is seeking to fill a position of **Mechanical Engineer (HVAC)** in the Engineering Department's Engineering/Architecture Design Division. As a Mechanical Engineer you will be responsible for the design of heating, ventilation and air conditioning (HVAC) systems and central heating and refrigeration plants (CHRPS) for buildings and structures at various Port Authority facilities. You will also develop project scopes and design criteria, as well as budget for design services and design schedules, provide technical advice and assistance to facility and other Port Authority personnel, and prepare the technical scope of work and audit the mechanical engineering designs performed by consultants.

Requirements:

- Bachelor's Degree in Mechanical Engineering
- Minimum of ten years diversified experience in the design of heating, ventilation and air conditioning systems for commercial/industrial buildings, central heating and refrigeration plants, air handling and thermal distribution systems
- Working knowledge of New York State, New York City and New Jersey building codes
- Direct experience in the preparation of contract drawings and specifications
- Working knowledge of AutoCad
- P. E. License desirable

Application Process:

We offer a competitive salary and outstanding benefits package and a professional environment that supports development and recognizes achievement.

Interested applicants can apply directly online to this position by visiting www.JoinThePortAuthority.com. Follow the instructions to view Job Postings, type the following reference number **7924** in the keyword search box.

Only applicants under consideration will be contacted.

Equal Opportunity Employer

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If you would like to place an advertisement in the Thermogram, please contact Jori Fahrenfeld @ 609-520-1600 or via email Jori.Fahrenfeld@Emerson.com for further details