Meeting Wednesday June 12, 2013

LEED Platinum Building Tour

Next Wednesday we will have a presentation and tour of the Office of Parks and Recreation and Historic Preservation (OPRHP) LEED Platinum building in Staatsburg New York. This 30,000 SF building is a re-use of an old school for the deaf built in 1930 and now houses the offices that manage our Parks in the Hudson Valley. The project features very efficient envelope modifications, closed loop ground coupled system, heat recovery systems, solar photovoltaic systems.

This project is the first public building in New York State to achieve a LEED for New Construction Platinum Rating. The building consists primarily of offices and public spaces as well as the regional park police. The HVAC systems includes thirty-two closed-loop geothermal heat pumps, two make-up air units with heat recovery, pumps, exhaust fans, and geothermal heat exchangers. As part of the LEED certification the OPRHP has monitoring and verification (M & V) services to review the utility improvements and compare them to the original energy model. This effort served to prove that the actual energy performance met the modeled performance of 53% energy savings compared to a code building baseline. Construction of the Taconic Region’s new headquarters was supported by more than $128,000 in incentives from the New York State Energy Research and Development Authority (NYSERDA). This funding helped offset the purchase and installation costs of the building’s energy efficient and green building measures and are anticipated to reduce its energy costs by nearly $40,000 annually.

State Parks also was awarded a NYSERDA High Performance Building Plaque in recognition of the energy-saving measures installed in the building. The plaques are presented to hospitals, libraries, schools, businesses and organizations that have constructed buildings designed to perform at least 30 percent above the New York State Energy Conservation Construction Code. The new Taconic Region headquarters building is estimated to perform 53 percent above code and is New York's 41st recipient of this award.

New York State Parks

The New York State Office of Parks, Recreation and Historic Preservation oversees 178 state parks and 35 historic sites. Margaret Lewis Norrie State Park, established in 1934, and Ogden Mills and Ruth Livingston Mills Memorial Park, established in 1938, were consolidated in the 1960s and collectively total 1,093 acres along the Hudson River. For more information on any of these recreation areas, call 518-474-0456 or visit www.nytparks.com.

Where: Office of Parks and Recreation
Staatsburg NY. 9 Old Post Road Staatsburg, NY 12580

When: June 12, 2013

Time: 5 to approximately 7 PM.

Cost - NONE – this event is sponsored by the ASHRAE Bi-State Chapter to thank the members for supporting the Chapter this year.

Light Fare (sandwiches, soft drinks etc) shall also be provided.

Space is limited so please register by end of day Monday June 10, email Jim Dolan, jdolan@olace.com
President’s Message
By John A. Fusco, P.E., LEED AP

A little bit of rain did not put a damper on our golf outing! We had nearly all of our golfers attend, and enjoyed a day on the links, food, drinks, and prizes! I would like to thank Steve Abbattista for organizing this event.

We have a final meeting of the year planned for June 12. We have a tour of the New York States Parks and Recreation offices at Staatsburg. As an end of the year celebration and in appreciation of our members, a dinner of sandwiches and salads will be provided compliments of the Chapter. As my final President’s message of the year I would like to thank my fellow Officers and Board of Governors for their support throughout the year. I would like to thank our members who support our chapter’s activities, whether by volunteering on committees, contributing to the Research promotion campaign, attend our monthly meeting, or our golf outing. Again our chapter operates because of the efforts of the Board of Governors, Officers, and Committee Chairs. For us to continue this effort, we need volunteers to make it work. Any one of the board members or offices would be more than happy to discuss opportunities with those interested in chapter activities and leadership roles.

Please refer to the link below to view the programs offered for the ASHRAE Region 1 CRC(Chapter/Regional Conference) in Burlington, VT. If anyone is interested in attending, please ask any questions you may have to one of our Board members. Remember, The Bi-State Chapter will be hosting this event next year, and volunteers to help with the effort would be appreciated! [http://www.ashrae2013crc.com/]

In closing, I would like to wish Terry Connor much success as the upcoming Chapter President for 2013-14!

John A. Fusco, P.E., LEED AP
Bi-State Chapter President

Historical Note — Bob Roston, Bi-State Historian

Cool Picnic Basket
Picnic Basket Wanted. The Refrigeration and air Conditioning Institute of Chicago is offering a cash award of $500 [$7,500 in today’s dollars] to the inventor of a refrigerated picnic basket, compact enough to fit easily into the average car, roomy enough to hold a sizeable lunch, and inexpensive enough so it may be retailed at $20 [$300 in today’s dollars] or less. The refrigerating system of such a basket, Ray D. Smith, president, suggests, would probably be operated by the motor through a plug-in conveniently located. Insulation, he states, would necessarily be important.

— “What’s Going on in the Mechanical Refrigeration Field”
Ice and Refrigeration, May 1937

First Grid-Connected Offshore Wind Turbine in the U.S. Launched

The United States’ first grid-connected offshore floating wind turbine prototype was recently launched off the coast of Castine, Maine. Led by the University of Maine, this project — supported by a 12 million Energy Department investment over five years — represents the first concrete-composite floating platform wind turbine to be deployed in the world.

The University of Maine and its project partners conducted extensive design, engineering and testing of floating offshore wind turbines, followed by the construction and deployment of its 65-foot-tall VolturnUS prototype. At 1:8th the scale of a commercial installation, this project will collect data to validate and improve floating wind turbine designs, while helping to address technical barriers to greater offshore wind cost reductions.

Climate Milestone: Earth’s CO₂ Level Passes 400 ppm

An instrument near the summit of Mauna Loa in Hawaii has recorded a long-awaited climate milestone: the amount of carbon dioxide in the atmosphere there has exceeded 400 parts per million (ppm) for the first time in 55 years of measurement—and probably more than 3 million years of Earth history. The last time the concentration of Earth's main greenhouse gas reached this mark, horses and camels lived in the high Arctic. Seas were at least 30 feet higher—at a level that today would inundate major cities around the world. The planet was about 2 to 3 degrees Celsius (3.6 to 5.4 degrees Fahrenheit) warmer. But the Earth then was in the final stage of a prolonged greenhouse epoch, and CO2 concentrations were on their way down. This time, 400 ppm is a milepost on a far more rapid uphill climb toward an uncertain climate future.

Two independent teams of scientists measure CO2 on Mauna Loa: one from the U.S. National Oceanic and Atmospheric Administration (NOAA), the other from the Scripps Institution of Oceanography. The NOAA team posted word on its web site: the daily average for May 9, 2013 was 400.03 ppm. The Scripps team later confirmed the milestone had been crossed.
Research Promotion Contribution Form

PLEASE COMPLETE THE INFORMATION BELOW AND RETURN WITH YOUR CONTRIBUTION TO:

James Kolk
528 Middle Street
North Babylon, NY 11703
Phone: 631-219-8502  Fax: 610-923-3352

Please accept my research investment in the amount of $________________
Make checks out to ASHRAE Research.

Name___________________________________________Member #____________________

Company________________________________________Chapter  Bi-State______________

Address_____________________________________________________________________

City_____________________________________________State_________Zip____________

Please check one: (   ) Personal contribution
(   ) Company contribution

Charge my gift to: (   ) Visa (   ) Master Card (   ) American Express

Credit Card #___________________________________Expiration Date__________________

Signature____________________________________________________________________

Donors are recognized for their contributions as follows:

Honor Roll contributors are listed in the October ASHRAE Journal and receive the commemorative coin recognizing Giants in HVAC&R invention or innovation.

Individual Honor Roll beginning at $100
Corporate Honor Roll beginning at $150

Investors with contributions of $250 or more receive a wall plaque that can display six commemorative coins.

Contributions in any amount are gratefully received and 100% of the contribution goes directly to research. All contributions are tax deductible.
Department of Energy Awards $1.4 Million to Train Future Synchrophasor Engineers

Projects at seven colleges and universities around the U.S. will receive awards from the Department of Energy to better prepare the electricity industry workforce of the future in synchrophasor technology.

The DOE believes the use of synchrophasor data from Phasor Measurement Units (PMUs) is a promising tool to monitor modern electric power systems, and identify and respond to deteriorating or abnormal grid conditions more quickly. It points out that more than 800 PMUs are being installed at strategic locations across the nation's transmission system, thanks to Recovery Act funding.

But the problem is, says the DOE, “only a limited number of professionals, researchers and students have the knowledge and expertise to understand and analyze the high-speed, timesynchronized data that will be generated by the deployment of these devices.”

The $1.4 million in funding will try to correct that deficit by providing researchers and students with access to data provided by their utility collaborators and creating an opportunity for academic institutions to collaborate with other stakeholders to expand their graduate and undergraduate engineering curricula in grid dynamics, process simulation, control and analysis tools. Students and researchers will receive hands-on simulator-based training experience and learn how commercial-scale power plants and systems respond dynamically to grid oscillations and system disturbances, and to stress from high power demands.

U.S. Army and Lockheed Set Up Microgrid at Fort Bliss, Texas

The U.S. Army and Lockheed Martin officials commissioned the Department of Defense's first microgrid, a system for integrating renewable resources and energy storage, at a ribbon-cutting ceremony at Fort Bliss, Texas, on Friday. The project was funded by the DoD's Environmental Security Technology Certification Program.

The Fort Bliss microgrid is designed to reduce overall greenhouse gas emissions and energy costs while being able to operate independent of the electric utility grid when needed. That gives the military installation some extra added energy security.

Setting up the microgrid involved installing hardware, upgrading software, bridging traditional and renewable energy sources and making sure the microgrid operates efficiently. The program now goes into a demonstration phase through July.

“We are excited to lead the Army in energy efficiency,” Major Joe Buccino, Fort Bliss spokesman, said in a statement. The microgrid is “aimed at reducing our carbon footprint,” he added. Being able to operate off the grid gives the base a tactical advantage as the U.S. enters “an age of emerging threats and cyber warfare. We are assuming an unacceptable measure of risk at fixed installations of extended power loss in the event of an attack on the fragile electric grid. This project represents the future of military energy security.”

“Microgrids are the key to an energy efficient and secure future for sites such as defense installations, hospitals, universities, commercial businesses and industrial sites,” said Jim Gribschaw, director of energy programs at Lockheed Martin. In 2010, Lockheed Martin received the contract to demonstrate a so-called intelligent microgrid at the Army’s Brigade Combat Team complex at Fort Bliss, according to a news release. The microgrid consists of onsite backup generation, a 120-kilowatt solar array and a 300-kilowatt energy storage system, among other components. The energy storage system is critical to lower costs and maintain a steady flow of power.
ASHRAE Psychrometric Chart App for iPad Available

The new ASHRAE Psychrometric Chart app is the first truly interactive graphical psychrometric chart for the iPad, and it includes both I-P and SI units. Easily plot HVAC and other psychrometric processes while out in the field, save the graphs, and then email the graph and results to yourself or clients.

The ASHRAE Psych Chart app includes the following features and functionality:

- Display a fully customizable psychrometric chart in both landscape and portrait modes.
- Customize the graph in many different ways, including specifying the psychrometric chart line colors, chart background color, hide/display status of chart lines, point colors, process line colors, units of graph values, and the min/max limits of the chart.
- Using your finger, plot as many points as you want on the screen. As you move your finger around the graph, the psychrometric properties at the top of the screen dynamically update. In addition, you can double-tap a point to display the point properties and then edit them.
- Create psychrometric processes by plotting points then connecting them with process lines. Also, create custom labels anywhere on the chart.
- Email a list of all the points and their properties for a completed chart, along with a PDF of the chart itself.
- Create an unlimited number of psychrometric chart projects. Also, you can create templates that you can reuse over and over again.
- Zoom in or out of the chart by “pinching” the iPad screen to view items in detail.

HVAC Design Training

2 Courses, 5 Days of Intense Instruction

March 18-22, 2013 • June 3-7, 2013 • August 12-16, 2013

HVAC Design: Level I - Essentials

This training provides intensive, practical education for 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

Developed by industry-leading professionals, the training course provides participants with advanced level information about designing, installing and maintaining HVAC systems that can be put to immediate use. Participants will gain an in-depth look into Standards 55, 62.1, 90.1, and 189.1 and the Advanced Energy Design Guides, as well as a range of other HVAC topics including: HVAC equipment and systems; energy modeling; designing mechanical spaces; designing a chiller plant; and BAS controls.

Creating Effective, Highly Skilled Engineering Team Members

- Gain knowledge to make immediate contributions to design projects
- Participate in in-depth, practice-focused training
- Learn from industry leaders selected by ASHRAE
- Receive free bonus resources valued at over $200

Visit www.ashrae.org/hvacdesign to register
Bi-State Chapter Officers and Governors 2012—2013

<table>
<thead>
<tr>
<th>Position</th>
<th>First Name</th>
<th>Last Name</th>
<th>Email</th>
<th>Phone</th>
<th>Fax</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Officers</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>President</td>
<td>John</td>
<td>Fusco</td>
<td><a href="mailto:jfusco@olace.com">jfusco@olace.com</a></td>
<td>(914) 747-2800</td>
<td>(914) 747-0453</td>
</tr>
<tr>
<td>President-Elect</td>
<td>Michael</td>
<td>Circosta</td>
<td><a href="mailto:mjcarmonk@optonline.net">mjcarmonk@optonline.net</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vice President</td>
<td>Cliff</td>
<td>Konitz</td>
<td><a href="mailto:c.konitz@verizon.net">c.konitz@verizon.net</a></td>
<td>(845) 297-5864</td>
<td>(845) 297-5864</td>
</tr>
<tr>
<td>Secretary</td>
<td>Brendan</td>
<td>Smith</td>
<td><a href="mailto:bsmith@lynstaar.com">bsmith@lynstaar.com</a></td>
<td>(914) 741-1290 ext 17</td>
<td></td>
</tr>
<tr>
<td>Treasurer</td>
<td>Dennis</td>
<td>LaVopa</td>
<td><a href="mailto:dlavopa@dlFlowTech.com">dlavopa@dlFlowTech.com</a></td>
<td>(845) 265-2828</td>
<td>(845) 265-2745</td>
</tr>
</tbody>
</table>

| **Governors**     |            |           |                              |             |               |
| BOG (term ends June 2015) | Terry       | Connor   | Terry.Connor@jci.com         | (914) 593-5223 | (914) 593-5201 |
| BOG (term ends June 2015) | Brendan    | Smith    | bsmith@lynstaar.com          | (914) 741-1290 ext 17 |               |
| BOG (term ends June 2015) | James       | Dolan    | jdolan@olace.com             | (914) 747-2800 | (914) 747-0453 |
| BOG (term ends June 2014) | Steven     | Abbattista| sabbattista@olace.com        | (914) 747-2800 | (914) 747-0453 |
| BOG (term ends June 2014) | Cliff       | Konitz   | c.konitz@verizon.net         | (845) 297-5864 | (845) 297-5864 |
| BOG (term ends June 2014) | Joseph      | Trongone | jatrong@optonline.net        | (914) 741-1290 |               |
| BOG (term ends June 2013) | Michael    | Circosta | mjcarmonk@optonline.net      |             |               |
| BOG (term ends June 2013) | Dennis      | LaVopa   | dlavopa@dlFlowTech.com       | (845) 265-2828 | (845) 265-2745 |
| BOG (term ends June 2013) | Robert      | Roston   | bob@rostonfamily.com         | (914) 761-3364 | (203) 504-7949 |
| Chapter Delegate  | Brendan     | Smith    | bsmith@lynstaar.com          | (914) 741-1290 ext 17 |               |

| **Committee Chairs** |            |           |                              |             |               |
| Research Promotion  | James       | Kolk     | jkolk@victaulic.com           |             |               |
| Student Activities  | Nicholas    | Salomone | nicksalomone@gmail.com        |             |               |
| Membership Promotion| James       | Dolan    | jdolan@olace.com              | (914) 747-2800 | (914) 747-0453 |
| Refrigeration       | John        | Fusco    | jfusco@olace.com              | (914) 747-2800 | (914) 747-0453 |
| Webmaster           | Cliff       | Konitz   | c.konitz@verizon.net          | (845) 297-5864 | (845) 297-5864 |
| Newsletter Editor   | Michael     | Gordon   | gordonm@emfcontrols.com       | (914) 747-1007 | (914) 747-1054 |
| Historian           | Robert      | Roston   | bob@rostonfamily.com          | (914) 761-3364 | (203) 504-7949 |
| Reception           | Joseph      | Trongone | jatrong@optonline.net         | (914) 332-7658 |               |
| Administrator       | Cliff       | Konitz   | c.konitz@verizon.net          | (845) 297-5864 | (845) 297-5864 |
| Golf                | Steven      | Abbattista| sabbattista@olace.com        | (914) 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 2012-13 Executive Committee and Society Contacts

DRC – Director & Regional Chair
Joseph L Furman
Automated Logic
16 Country Way
Wallingford, CT 06492-5356
W: (203)678-2208
joe.furman@automatedlogic.com

ARC – Assistant Regional Chair & Treasurer
Spencer Morasch
Jersey Central Power & Light
331 Newman Springs Rd Bldg. 3 Suite 325
Red Bank, NJ 07701-5688
W: (732)212-4133
smorasch@firstenergycorp.com

Nominating Committee Member
Emery Otruba, P.E.
Evergreen Engineering
262 Johnson Hill Rd
Hoosick Falls, NY 12090-4615
W: (518)225-2771
eotruba@verizon.net

Nominating Committee Alternate
Russell J Stuber
U & S Services Inc
233 Fillmore Ave Ste 11
Tonawanda, NY 14150-2316
W: (716)693-4490
stuberr@usservicesinc.com

Nominating Committee 2nd Alternate
Darcy A Carbone
Stebbins-Duffy, Inc.
6 Damon Rd
Medford, MA 02155-2903
W: (617)957-2567
dcarbone@stebbinsduffy.com

RVC Research Promotion
Chris Phelan
Thermco
228 Scoles Ave
Clifton, NJ 07012
W: (617)957-2567
chrisphelan@thermcoreps.com

RVC Chapter Technology Transfer
Alexander Weiss, PE
8 Bergen Beach Pl
Brooklyn, NY 11234-5743
W: (718)251-1154
weisseng@gmail.com

RVC Student Activities
Om Taneja, PhD, Dr. USDA
79 Summit Dr
Basking Ridge, NJ 07920-1960
W: (212)264-4465
om.taneja@gsa.gov

Regional Chapter Programs Chair
Peter Oppelt
R.F. Peck Co.
191 Moorland Rd
Rochester, NY 14612-3421
W: (585)227-1720
poppelt@rfpeck.com

Regional Refrigeration Chair
Mark Cambria, PE
M/E Engineering, PC.
433 State Street, Suite 410
Schenectady, NY 12305
(W) 518.533.2171
mcambria@meengineering.com

Regional Historian
Alexander Weiss, PE
8 Bergen Beach Pl
Brooklyn, NY 11234-5743
W: (718)251-1154
weisseng@gmail.com

Regional Electronics Communication Committee Chair & Newsletter Judge
Heather L. Platt, P.E.
SCMC, LLC.
PO Box 1031
Niagara Falls, NY 14304
W: (716)255-1462
HPlatt@SenecaCM.com

Regional Electronics Communication Committee Alternate
Kevin Gallen, P.E.
Gallen Engineering, PC

Regional Representative
Garry N. Myers
WSP Flack + Kurtz
73 Bonnie Way
Allendale, NJ 07401-1127
W: (212)951-2815
Garry.Myers@wspfk.com

Regional Young Engineers in ASHRAE
Cara S Martin
Novus Engineering
25 Delaware Ave.
Delmar, New York 12054
W: (518)439-8235
cmartin@novusengineering.com

Director of Member Services
Joyce Abrams
ASHRAE
1791 Tullie Circle, N.E.
Atlanta, GA 30329
404.636.8400
jabrams@ashrae.org

Communications Manager
Jodi Scott
ASHRAE
1791 Tullie Circle, N.E.
Atlanta, GA 30329
404.636.8400
jscott@ashrae.org
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

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.

Breakthrough Industrial Carbon Capture Project Launches

A hydrogen production company has successfully begun capturing carbon dioxide from industrial operations and is now using that carbon for enhanced oil recovery (EOR) and securely storing it underground. At full-scale operation, more than 90% of the carbon dioxide from the product stream of two methane steam reformers—approximately one million metric tons per year—will be delivered for sequestration and EOR. This will lead to an estimated annual increase in oil production of 1.6 to 3.1 million barrels from the West Hastings oil field located about 20 miles (32 km) south of Houston. The approximately $431 million project is supported by a $284 million investment from the U.S. Department of Energy.
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

<table>
<thead>
<tr>
<th>Month</th>
<th>Date</th>
<th>Promotion</th>
<th>Main Presentation</th>
<th>Tech Session</th>
</tr>
</thead>
<tbody>
<tr>
<td>August</td>
<td>8/25-26/2013</td>
<td>Region 1 CRC</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Join us at ASHRAE’s 2013 Annual Conference
Denver, Colorado | June 22–26, 2013

Take advantage of the opportunity to discuss and examine the latest topics in the building industry, such as high performing buildings and integrated design, through the technical program; participate in technical tours; attend ASHRAE Learning Institute courses; and earn professional credits.

Research Summit — held in conjunction with the 2013 Annual Conference. The summit addresses the latest research results, innovative research techniques and forecasts future research directions.

Technical Program — presentations and papers focus on current research worldwide; core HVAC&R applications and systems; and Integrated Project Design, Energy Modeling and Building Efficiency Performance.

Networking — share ideas and learn from fellow members from your hometown and around the world.


Register Early for the Best Deal!
www.ashrae.org/denver

bEQ Expands by Adding ‘As Designed’ Label

ASHRAE’s Building Energy Quotient (bEQ), a building energy labeling program that allows the industry to zero-in on opportunities to lower building operating cost and make informed decisions to increase value, has been expanded. With the inclusion of a newly implemented “As Designed” label, the program is now two labels in one. Its “As Designed” label rates the building’s potential energy use under standardized conditions independent of the building’s occupancy and use. The “In Operation” label rates the building’s actual measured energy use as influenced by the building’s occupancy and use.

Statements made in this publication are not expressions of the Society or of the Chapter and may not be reproduced without special permission of the chapter.
Distinguished Guests

William P. “Bill” Bahnfleth
Ph.D., P.E., Fellow ASHRAE, ASME Fellow
2013-14 President ASHRAE

William P. “Bill” Bahnfleth, Ph.D., P.E., Fellow ASHRAE, ASME Fellow, is a professor of Architectural Engineering and director of the Indoor Environment Center at The Pennsylvania State University, University Park, Pa. As ASHRAE’s president, Bahnfleth chairs the Society’s Board of Directors and Executive Committee.

We are honored to have the current Society President visit Region I for this event.

Darryl Boyce
P. Eng., Fellow ASHRAE
2013-14 Vice President ASHRAE

Darryl Boyce, P. Eng., Fellow ASHRAE, is assistant vice president (Facilities Management and Planning), Carleton University, Ottawa, Ontario, Canada.

As vice president, Boyce is a member of the Board of Directors and the Executive Committee and serves as vice chair of the Publishing and Education Council. He is the recipient of an ASHRAE Distinguished Service Award.

Rusty DeWees
“The Logger”

Rusty DeWees alter ego, The Logger, is a raw, energetic backwoodsman that is a combination of all that’s wonderful and wacky about the northern New England spirit. Some might say Rusty’s comedy is a mix of Larry the Cable Guy and Prairie Home Companion. The Logger stage show is a hilarious combination stand-up and theatre show that also incorporates plenty of tight pin-point funny ad libs, and recently, a great set of country kickin’ music.

The Boston Globe says, The Logger is, “Inventive, entertaining, exceptional”.

You won’t want to miss this year’s CRC! Burlington is the perfect venue to accomplish our annual Region I ASHRAE business and relax in a beautiful setting.

The Burlington Hilton overlooks Lake Champlain (the “Sixth Great Lake”) and is within walking distance to waterfront activities and the renowned Church Street Marketplace. The spouses tour will be a chartered trip to Stowe with stops at the Trapp Family Lodge and Ben & Jerry’s plant in Waterbury. Our planning committee has put together a CRC Event that will be talked about for a long time.

Thanks to our sponsors, we have been able to assemble a quality event at a very reasonable cost. All registrations must be made through our CRC website. Please pass this flyer along to your Chapter Officers and leaders who will be attending.

We look forward to hosting Region I in Burlington August 15th through the 17th. We will do our best to make this CRC a productive and memorable weekend!

Tom Zoller P.E. (CRC Chairman)

CONFERENCE REGISTRATION FEES

<table>
<thead>
<tr>
<th></th>
<th>Before June 30th</th>
<th>After June 30th</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full Conference</td>
<td>$350</td>
<td>$450</td>
</tr>
<tr>
<td>Companion Full Conference with Stowe trip***</td>
<td>$235</td>
<td>$335</td>
</tr>
<tr>
<td>Companion Full Conference without Stowe trip</td>
<td>$200</td>
<td>$300</td>
</tr>
<tr>
<td>Friday/Saturday Conference</td>
<td>$200</td>
<td>$300</td>
</tr>
<tr>
<td>Friday/Saturday Companion</td>
<td>$125</td>
<td>$225</td>
</tr>
<tr>
<td>Saturday Only</td>
<td>$100</td>
<td>$200</td>
</tr>
<tr>
<td>Kids under 18</td>
<td>$25</td>
<td>$100</td>
</tr>
</tbody>
</table>

*** Space limited - first come, first serve. If kids will be attending the Stowe trip, must register each kid at Companion Full Conference rate ($235)

All rooms at the Hilton are nice rooms, however, the lake view rooms have a stunning view of Lake Champlain. There are a limited number of these rooms

Hilton Rooms Rates (until 7/25)

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2 Queen beds, city view</td>
<td>$189</td>
</tr>
<tr>
<td>1 King bed, city view</td>
<td>$189</td>
</tr>
<tr>
<td>2 Queen beds, lake view</td>
<td>$225</td>
</tr>
<tr>
<td>1 King bed, lake view</td>
<td>$225</td>
</tr>
</tbody>
</table>

Hilton WEB Link

So here’s how you register . . .

Log onto the CRC2013 website:

www.ashrae2013crc.com

Click on “Registration” tab, follow directions.

PLEASE NOTE: Payments must be made through PayPal.

NOTE: Hotel reservation is separate from conference registration.
## EVENT SCHEDULE

<table>
<thead>
<tr>
<th>Day</th>
<th>Start Time</th>
<th>End Time</th>
<th>Event</th>
<th>Location</th>
<th>Attendees</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>THURSDAY</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>12:00pm</td>
<td>7:00pm</td>
<td>Registration</td>
<td>Mezzanine (2nd Floor)</td>
<td>All Attendees</td>
</tr>
<tr>
<td></td>
<td>12:00pm</td>
<td>2:00pm</td>
<td>Region 1 Audit</td>
<td>Burlington Conf Room</td>
<td>Invited Region 1 Officers</td>
</tr>
<tr>
<td></td>
<td>1:00pm</td>
<td>3:00pm</td>
<td>Hospitality Suite</td>
<td>Room 737 Seventh Floor</td>
<td>Registered Attendees</td>
</tr>
<tr>
<td></td>
<td>1:00pm</td>
<td>3:15pm</td>
<td>Technical Sessions - National Life / UVM Aiken Hall</td>
<td>Vermont Conference Room</td>
<td>Registered Attendees</td>
</tr>
<tr>
<td></td>
<td>3:30pm</td>
<td>5:30pm</td>
<td>Business Meeting 1</td>
<td>Lake Champlain (2nd Floor)</td>
<td>Delegates, Alternates &amp; Regional Officers and Chairs</td>
</tr>
<tr>
<td></td>
<td>6:00pm</td>
<td>7:00pm</td>
<td>Welcome Reception</td>
<td>Seasons (2nd Floor)</td>
<td>Registered Attendees</td>
</tr>
<tr>
<td></td>
<td>7:00pm</td>
<td>8:30pm</td>
<td>Welcome Dinner</td>
<td>Seasons (2nd Floor)</td>
<td>Registered Attendees</td>
</tr>
<tr>
<td></td>
<td>10:00pm</td>
<td>1:00am</td>
<td>Hospitality Suite</td>
<td>Room 737 Seventh Floor</td>
<td>Registered Attendees</td>
</tr>
<tr>
<td><strong>FRIDAY</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>7:00am</td>
<td>7:00pm</td>
<td>Registration</td>
<td>Mezzanine (2nd Floor)</td>
<td>All Attendees</td>
</tr>
<tr>
<td></td>
<td>9:00am</td>
<td>11:00am</td>
<td>Hospitality Suite</td>
<td>Room 737 Seventh Floor</td>
<td>Registered Attendees</td>
</tr>
<tr>
<td></td>
<td>7:00am</td>
<td>9:00am</td>
<td>Breakfast</td>
<td>Mezzanine (2nd Floor)</td>
<td>Registered Attendees</td>
</tr>
<tr>
<td></td>
<td>8:00am</td>
<td>9:00am</td>
<td>Local ASHRAE Recognition Breakfast</td>
<td>Vermont Conference Room</td>
<td>Invited Society and Local Guests</td>
</tr>
<tr>
<td></td>
<td>8:00am</td>
<td>10:00am</td>
<td>Caucus</td>
<td>Lake Champlain (2nd Floor)</td>
<td>Delegates &amp; Alternates ONLY</td>
</tr>
<tr>
<td></td>
<td>9:00am</td>
<td>4:00pm</td>
<td>Companion Trip to Stowe</td>
<td>1st Floor Lobby</td>
<td>Registered Attendees w/ RSVP</td>
</tr>
<tr>
<td></td>
<td>10:00am</td>
<td>11:45am</td>
<td>Chapter Operations Workshop</td>
<td>Lake Champlain (2nd Floor)</td>
<td>Chapter Officers</td>
</tr>
<tr>
<td></td>
<td>12:00pm</td>
<td>1:00pm</td>
<td>Lunch</td>
<td>Mezzanine (2nd Floor)</td>
<td>Registered Attendees</td>
</tr>
<tr>
<td></td>
<td>2:00pm</td>
<td>3:30pm</td>
<td>Executive Session</td>
<td>Lake Champlain (2nd Floor)</td>
<td>Delegates &amp; Alternates ONLY</td>
</tr>
<tr>
<td></td>
<td>3:30pm</td>
<td>5:00pm</td>
<td>Tour of UVM Aiken Center</td>
<td>1st Floor Lobby</td>
<td>Registered Attendees w/ RSVP</td>
</tr>
<tr>
<td></td>
<td>3:30pm</td>
<td>5:45pm</td>
<td>Business Meeting 2</td>
<td>Lake Champlain (2nd Floor)</td>
<td>Delegates, Alternates &amp; Regional Officers and Chairs</td>
</tr>
<tr>
<td></td>
<td>6:00pm</td>
<td>10:00pm</td>
<td>Presidential Dinner</td>
<td>ECHO Center</td>
<td>Registered Attendees</td>
</tr>
<tr>
<td></td>
<td>10:00pm</td>
<td>???</td>
<td>YE A Event</td>
<td>Meet in Lobby</td>
<td>YE A Members</td>
</tr>
<tr>
<td></td>
<td>10:00pm</td>
<td>12:00am</td>
<td>Hospitality Suite</td>
<td>Room 737 Seventh Floor</td>
<td>Registered Attendees</td>
</tr>
<tr>
<td><strong>SATURDAY</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>7:00am</td>
<td>10:00am</td>
<td>Registration</td>
<td>Mezzanine (2nd Floor)</td>
<td>All Attendees</td>
</tr>
<tr>
<td></td>
<td>9:00am</td>
<td>11:00am</td>
<td>Hospitality Suite</td>
<td>Room 737 Seventh Floor</td>
<td>Registered Attendees</td>
</tr>
<tr>
<td></td>
<td>7:00am</td>
<td>9:00am</td>
<td>Breakfast</td>
<td>Mezzanine (2nd Floor)</td>
<td>Registered Attendees</td>
</tr>
<tr>
<td></td>
<td>8:00am</td>
<td>9:45am</td>
<td>Business Meeting 3</td>
<td>Lake Champlain (2nd Floor)</td>
<td>Delegates, Alternates &amp; Regional Officers and Chairs</td>
</tr>
<tr>
<td></td>
<td>8:00am</td>
<td>11:00am</td>
<td>Government Activities Workshop</td>
<td>Adirondack Ballroom</td>
<td>GA Chairs</td>
</tr>
<tr>
<td></td>
<td>8:00am</td>
<td>9:00am</td>
<td>Research Promotion Workshop</td>
<td>Montpelier C</td>
<td>Research Chair</td>
</tr>
<tr>
<td></td>
<td>8:30am</td>
<td>11:30am</td>
<td>Membership Promotion Workshop</td>
<td>Montpelier B</td>
<td>Membership Chairs</td>
</tr>
<tr>
<td></td>
<td>8:30am</td>
<td>11:30am</td>
<td>CTTC Workshop</td>
<td>Vermont Conference Room</td>
<td>CTTC Chairs</td>
</tr>
<tr>
<td></td>
<td>8:30am</td>
<td>9:30am</td>
<td>RECC Workshop</td>
<td>Burlington Conf Room</td>
<td>RECC Chairs</td>
</tr>
<tr>
<td></td>
<td>8:30am</td>
<td>10:30am</td>
<td>Student Activities Workshop</td>
<td>Montpelier A</td>
<td>Student Activities Chair</td>
</tr>
<tr>
<td></td>
<td>10:00am</td>
<td>11:30am</td>
<td>Historian Workshop</td>
<td>Montpelier C</td>
<td>Historians</td>
</tr>
<tr>
<td></td>
<td>10:00am</td>
<td>11:30am</td>
<td>YEA Workshop</td>
<td>Burlington Conf Room</td>
<td>YEA Members</td>
</tr>
<tr>
<td></td>
<td>10:00am</td>
<td>12:00pm</td>
<td>Hospitality Suite</td>
<td>Room 737 Seventh Floor</td>
<td>Registered Attendees</td>
</tr>
<tr>
<td></td>
<td>12:00pm</td>
<td>2:00pm</td>
<td>Awards Luncheon</td>
<td>Green Mountain Ballroom</td>
<td>Registered Attendees</td>
</tr>
<tr>
<td></td>
<td>2:30pm</td>
<td>3:30pm</td>
<td>CRC Debrief</td>
<td>Burlington Conf Room</td>
<td>CRC Host Committee &amp; Guests</td>
</tr>
</tbody>
</table>

Conference schedule is preliminary, subject to change prior to CRC

The Presidential Dinner will be held at one of the Burlington lakefront Crown Jewels:

Special Thanks to our sponsors who are making this CRC a memorable event:

**Platinum Level** ($5,000 minimum)
- Trane
- Urell

**Gold Level** ($2,500 minimum)
- Temperature Controls of Vermont
- Efficiency Vermont
- Well-McLain

**Silver Level** ($500 minimum)
- Vermont Heating & Ventilating
- Multistack
- Vermont Mechanical
- F.W. Webb
- Blake Group
- Dubois & King, Inc.
- Quality Air Control
- DAIKIN AC
- L.J. Early
- Yeaton Associates
- Hallam-ICS

**Bronze Level** ($150 minimum)
- R.F. Peck
- Dodge Engineering and Controls
- ARC Mechanical
- Control Technologies
- Advanced Comfort Systems
- RJ Murray
- Systems

Just a few of the local attractions . . .