



the Champ

Monthly Newsletter of the CHAMPLAIN VALLEY CHAPTER OF ASHRAE

Serving Vermont Since 1969

President's Message



Happy New Year! I hope all of you had a great holiday season and I wish you best for 2011.

We had another great turnout at our January's meeting. Unfortunately I was unable to attend. Big thanks to Jerry Kelman of Rawal Devices and Walt Joncas of Hy-Save Technologies for presenting to our group. I heard that the

new meal accommodations worked out great.

I want to congratulate Chris Reilly and Amy Patenaude for being awarded the 2011 ASHRAE Champlain Valley Chapter Young Engineer and Engineer of the Year Award. They will be submitted to the Vermont State YEOY and EOY as ASHRAE CVC's Candidates. Plaques will be awarded during February's meeting.

To all who didn't know the Champlain Valley Chapter will be hosting the 2013 Region 1 Chapter Regional Conference (CRC). We have formed a committee chaired by Tom Zoller as General Chair and Steve Poole as Assistant Chair, to help plan for the event. The committee has held its kick off meeting and is looking for more volunteers. Please consider, the more volunteers we have the less work each individual has to commit to. If you are interested in becoming a committee member please contact Tom Zoller or myself.

It is that time of the year again we need to assemble the 2011 nomination committee. This needs to be done hopefully prior to February's meeting so we can vote on the nominees. Please contact myself with nominations.

I hope to see all of you at our February meeting on Wednesday February 9th. We have distinguished lecturer Chris Mathis flying in to present on energy efficient window and fenestration technologies along with addressing the challenge of sustainability. The meeting will be a membership

promotion night; all members will receive one free drink. Please advise the meeting location will be at The Hampton Inn off from Exit 16 on I89. Sincerely,

Sincerely,
Shawn LaBelle
Chapter President

| |
|-------------------------------------------------------------------------------------------------------|
| Next Meeting |
| February 9th @ The Hampton Inn, Exit 16 off I89 |
| Distinguished Lecturer Chris Mathis |
| Membership Promotion Night (One Free Drink Ticket) |
| BOG Meeting 4:30 PM |
| First Topic 6 PM: Energy Efficient Window and Fenestration Technologies |
| Dinner 7 PM |
| Main Presentation 8 PM: "How Long Will it Last?" Addressing the Challenge of Sustainability |
| Meeting Cost |
| \$30/CVC |
| \$35 Non-Members |

contents

chapter reports

| | |
|--------------------------------------------|-------|
| President's Message | 1 |
| Meeting Calendar 2010-2011 | 2 |
| Technology Transfer | 4 |
| BOG Meeting Minutes | 4-6 |
| General Meeting Minutes | 6 |
| Student Activity Report | 7 |
| Treasurer's Report | 7 |
| Resource Promotion..... | 8 |
| Feb 9th Speaker Bios..... | 8-9 |
| The Two Pachyderm..... | 9 |
| Better Buildings By Design Conference..... | 10 |
| PAOE | 11 |
| Chapter Contacts | 11 |
| Advertising/Sponsors | 12-14 |

2010-2011 ASHRAE CVC MEETING CALENDAR

| September 1 st | October 6 th | November 3 rd | December 8 th | January 5 th |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>The Essex</p> <p>BOG Meeting - 4:30 pm Presentation - 6:00 pm Dinner - 7:00 pm</p> <p>HVAC Seismic Restraints</p> <p>Part 1 - Codes and Standards</p> <p>Part 2 - Applications Steve Fey - Mason Industries</p> | <p>The Essex</p> <p>BOG Meeting - 4:30 pm Presentation - 6:00 pm Dinner - 7:00 pm</p> <p>Tech Session - Chilled Beams / Krueger</p> <p>Main Presentation - Vermont Commercial Building Energy Code</p> <p>Tim Guitermen - Nugent Consulting</p> | <p>The Essex</p> <p>BOG Meeting - 4:30 pm Presentation - 6:00 pm Dinner - 7:00 pm</p> <p>Membership Promotion and Joint Meeting with Vermont Green Building Network (VGBN)</p> <p>USGBC - Lisa Whited - LEED Accreditation, Training & Maintenance</p> | <p>Hampton Inn</p> <p>BOG Meeting - 4:30 pm Presentation - 6:00 pm Dinner - 7:00 pm</p> | <p>Hampton Inn</p> <p>BOG Meeting - 4:30 pm Presentation - 6:00 pm Dinner - 7:00 pm</p> <p>Joint Meeting with RSES</p> <p>Speakers</p> <p>Jerry Kelman (Rawal – APR Control Devices)</p> <p>Walt Joncas (Hy-Save Technology – refrigeration pumping)</p> |
| February 9 th | March 2 nd | April 6 th | May 4 th | June 1 st |
| <p>Hampton Inn</p> <p>BOG Meeting - 4:30 pm Presentation - 6:00 pm Dinner - 7:00 pm</p> <p>ASHRAE Distinguished Lecturer</p> <p>Chris Mathis presenting on:</p> <ol style="list-style-type: none"> Energy Efficient Window & Fenestration Technologies How Long Will It Last? – Addressing the Challenge of Sustainability | <p>Hampton Inn</p> <p>BOG Meeting - 4:30 pm Presentation - 6:00 pm Dinner - 7:00 pm</p> <p>Facility Tour</p> <ol style="list-style-type: none"> John Morris of Motivair -Chiller water applications for data centers and critical environments Michael Hayes of Smardt - Magnetic levitated chiller compressor technology | <p>Location TBD</p> <p>BOG Meeting - 4:30 pm Presentation - 6:00 pm Dinner - 7:00 pm</p> <p>Meeting Sponsored by Vermont Technical College (VTC) Student Chapter Program TBD</p> | <p>The Essex</p> <p>BOG Meeting - 4:30 pm Presentation - 6:00 pm Dinner - 7:00 pm</p> <p>STD 189.1 Speaker TBD</p> | <p>End of Year Special</p> <p>Location and Topic TBD</p> |



turn to the experts™



Chuck Kabrehl

V.P. Commercial Sales & Engineering
ckabrehl@rjmurray.com

Dan O'Connor

Commercial Sales Engineering
doconnor@rjmurray.com

7 Northway Lane, Latham, NY 12110
79 Holly Court, Williston, VT 05495
518-690-4455 518-690-4990 (f)

Visit www.RJMurray.com for product info, what's new and employment opportunities.



REBATES FOR CENTRAL HEATING & COOLING

Now Including Boilers and Furnaces!

Contractors receive \$100 per unit for installing energy-efficient HVAC equipment in Vermont commercial buildings.

Your customers save money NOW with rebates and INTO THE FUTURE with energy savings.

It's Easy to Get Started

Download the 2010 Central Heating and Cooling Rebate Application from the Business Rebate Center at www.encyvermont.com. Or call toll-free: 888-921-5990.



Rebates and incentives on boilers, furnaces, AC units, economizers, and more!

For all Burlington projects, call the Burlington Electric Department at 802-865-7341.

www.encyvermont.com | 888-921-5990

Technology Transfer

I would like to take this opportunity to thank all the ASHRAE and RSES members who attended last month's meeting.

February's program will feature a distinguished lecturer, Chris Mathis, a building science consultant who will be sharing his knowledge on two topics.

One presentation will discuss energy efficient window and fenestration technologies. There are new window and glazing technologies available to residential and commercial building professionals and can have a dramatic impacts on HVAC sizing, peak loads and thermal comfort. This presentation will provide attendees with valuable information concerning key performance indices necessary in making energy efficient fenestration product decisions. Implications on HVAC sizing, peak loads and human comfort will be addressed for both existing and new buildings.

Chris's second presentation is titled "How long will it last? Addressing the challenge of Sustainability." This talk explores some of the roadblocks, pitfalls and opportunities on the road to truly sustainable buildings. It invites the audience to question long held assumptions and habits in building design, engineering and construction, and challenges how we assess numerous building performance attributes. From energy efficiency to durability to life expectancy, we will explore some of the challenges necessary to establish meaningful product and building performance metrics. He will examine how these sustainability objectives fit in with ASHRAE's minimum code standards (90.1 and 90.2) and green building standards (189.1).

A beneficial thing for members to be aware of if you have any documented personal contact with government officials at any level or with other business or professional groups which promote ASHRAE related subjects or chapter goals and objectives, please feel free to send me the details and I will provide recognition in our newsletter and our chapter gains Presidential Award of Excellence (PAOE) points as well for such activity by our members. The same recognition and chapter benefits apply to any member who earns or renews an ASHRAE certification.

Hope to see you all at February's meeting and would like to encourage the design and engineering community to attend these presentations.

Jan. BOG Meeting Minutes

Jan. 5th, 2011 BOG Meeting Minutes

Date: 1/5/11
Location: The Hampton In
Time Called to Order: 4:35pm
Called to Order By: Mike Cook, President Elect.
Minutes Recorded By: Nathan Mascolino, Secretary

ATTENDANTS

| | |
|--------------------|--------------------|
| Mike Cook | ARC Mechanical |
| Dick Wilcox | VHV |
| Tom Dacres | VHV |
| Nathan Mascolino | VHV |
| Ken Secor | KPS Consulting |
| Scott Alexander | LN Consulting |
| Peter Bailey | Dodge Engineering |
| Gretchen Langfeldt | Switchback brewery |

LAST MEETING MINUTES

Motion to approve Dec, 2010 meeting minutes was put forth by Tom D and seconded by Gretchen L, motion passed.

OFFICER REPORTS

President Report/Chapter Operations:

Shawn Labelle was not in attendance. Mike Cook presented the president report.

Mike reported that new newsletter editor did a fine job on the Dec newsletter and that we will continue to utilize her for future newsletters. All officers should send their reports in a standard font. (Times New Roman) Font size 12

Mike reported that the master schedule on the web page needs to me updated.

Mike reminded all officers to fill out their PAOE points.

Dick W reported that a new projector has been purchased and will be used for the first time this month. The projector did not come with a carry case, but one has been ordered. When it arrives Dick will place all necessary paperwork in the case and pass it on at the Feb meeting. A full cost breakdown will also be available for the Feb meeting.

A spare bulb has not been purchased to date.

There was discussion as to who will be responsible for storage, and transport of the new projector. The topic was tabled until the Feb meeting.

There was one nomination for the Engineer of the Year award, and one nomination for Young Engineer of the Year. Amy Patenaude was the Engineer of the year nominee. Chris Reilly was the Young Engineer of the year nominee.

A motion was made to name Amy Patenaude CVC Engineer of the year was put forth by Nathan M, seconded by Peter B. Motion Passed.

A motion was made to name Chris Reilly the CVC Young Engineer of the year was put forth by Nathan M, seconded by Scott A. Motion Passed.

A motion was made by Peter B to get plaques made for the CVC Engineer of the year, and CVC Young Engineer of the year. The plaques not to exceed \$80.- each, seconded by Dick. Motion passed. Peter will order the plaques.

Mike Reported that Steve Poole has volunteered to speak at the welcome ceremony for the Vt State Engineer week banquet.

A motion was made by Dick W to donate \$250.- and have the ASHRAE CVC logo at the sign in table at the banquet. Motion passed.

A motion was made by Dick W to pay the cost of the banquet ticket for Steve Poole, seconded by Scott. Motion Passed.

Mike reported that the ASHRAE Young Engineering association will have its annual event this year in Denver CO. Apr 1-3 Shawn will ask Chris Riley if he is interested in attending.

A motion was made by Peter B to pay Chris's fees associated with traveling and attending the event in an amount not to exceed \$2000.- seconded by Dick. Motion Passed.

There was discussion as to where to hold the rest of the meeting this year. It was decided that the meetings will stay at the Hampton unless there are any major objections.

There was brief discussion regarding scholarships. The topic was tabled

President Elect: Mike Cook

Mike reported that we are still looking for a second speaker for the March 2011 meeting. He is working on finding someone, and will update the master calendar when he does.

Mike reported the April meeting is scheduled to be held at VTC. Mike is going to suggest they show a recorded webinar on the topic of ASHRAE 189.1

Mike reported that we will be hosting a distinguished lecturer for the February meeting. We will need to provide him with transportation to and from the airport, and a hotel room. Mike will talk to Ken S about reserving a room at the Hampton. Mike will send a press release write up to Tom D. Tom D will distribute the press release to the local media.

Vice President/Membership Chair Report:

Tom Dacres

Tom reported that he is planning on recognizing all new members in attendance at the general meeting.

Tom Reported that next month is a membership promotion night. Tom put forth a motion that any current CVC member who brings a non-member will be eligible to pay half price for dinner. The new member would also be eligible to pay half price for dinner, seconded by Dick W. Motion passed.

Tom made a motion that the CVC chapter provide everyone in attendance at the Feb meeting with one ticket redeemable for one free drink. Seconded by Mike C. Motion passed.

Treasurer Report: Ken Secor

Ken S was not in attendance.

Ken's full monthly report will appear in the newsletter

Secretary Report: Nathan Mascolino

Nathan had nothing to report

Resource Promotion: Sandy Laflamme

Sandy Laflamme was not in attendance.

History: Gretchen Langfeldt

Nothing to report

Reception: Ray Hickey

Ray had nothing to report.

Refrigeration: Peter Bailey

Peter B would like to prove a plaque to Efficiency VT for their work on the award winning Tilly Drive project.

NEW BUSINESS

There will be a CRC 2013 Kick off meeting to be held at the VHV office on Friday Jan 14th at noon

A motion was made by Pete for the chapter to cover the cost of lunch for the group not to exceed \$40.- seconded by Scott A. Motion passed.

MEETING ADJOURNED

Motion to adjourn made by Tom D, seconded by Peter B. Meeting adjourned @ 6:10 PM

These minutes are the writers understanding of the discussions involved. If there are any exceptions taken, or omissions, please notify the writer immediately.

General Meeting Minutes

Date: 1/5/11
Location: The Hampton Inn
Minutes Recorded by: Nathan Mascolino, Secretary
Attendance: 38

ATTENDANTS

| | |
|------------------------|-------------------------------|
| Scott Alexander | LN Consulting |
| James Ashley | Green Mountain Geothermal |
| Tom Anderson | Cx Associates LLC |
| Pete Bailey | Dodge Engineering |
| Phil Bresnahan | Vermont Mechanical Inc. |
| Mike Cook | ARC Mechanical |
| Heather Condon | SmithEfficiency Vermont |
| Tom Dacres | Vermont Heating & Ventilating |
| Keith Downes | Efficiency Vermont |
| Rob Favali | Dubois & King |
| Sheryl Graves | Efficiency Vermont |
| Bill Gregory | L.J. Early Company |
| Corey Griffiths | Vermont Mechanical Inc. |
| Ray Hickey | Advanced Comfort Systems |
| Rick Hodgson | New England Air Systems |
| Walt Joncas | ECT HY-SAVE |
| Joe Kazukenus | Thermal Environmental Sales |
| Brice Kosnik | Basix Automatiom Integrators |
| Steve Kreigh | Mylan Technologies |
| Gretchen Langfeldt Co. | Switchback Brewing |
| Jim LaVallee | Vermont Mechanical |

| | |
|-------------------|--------------------------------------|
| Doug Maddox | Maddox Energy Consulting |
| Nathan Masoclino | Vermont Heating & Ventilating |
| Steve Poole | Vermont Heating & Ventilating |
| Jay Pilliod | Efficiency Vermont |
| Peter Tousley | Tcorp Inc. |
| Harris Unger | Advanced Comfort Systems |
| Rachael VanWagner | Efficiency Vermont |
| Rob Ward | Vermont Heating & Ventilation |
| Dick Wilcox | Vermont Heating & Ventilating |
| Andre Morin | VHV |
| Dan Gibbs | VHV |
| Steven Heitkamp | VHV |
| Clark Sweeney | Sweeney Refrigeration & HVAC Service |
| Randy Mead | Control Technologies |
| Dan Duncan | Control Technologies |
| Chris Lang | Fletcher Allen Health Care |
| Jerry Kelman | Rawal Devices |

GENERAL MEETING:

January's meeting was a joint meeting with RSCS held at the Hampton Inn & Events Center Burlington

TECH SESSION:

The tech session was given by Jerry Kelman of Rawal Devices. Jerry spoke to the benefits of the Rawal APR control and how it pertains to modulation of direct expansion and humidity control.

MAIN PRESENTATION:

The main presentation was given Walt Joncas of Hy-Save Technology. Walt in detail about liquid refrigerant pumps and their benefit in air conditioning, and refrigeration systems.

The Hampton Inn provided a nice facility and served a fine meal.

These minutes are the writers understanding of the discussions involved. If there are any exceptions taken, or omissions, please notify the writer immediately.

Student Activities Report

Student Activities Report

VTC Chapter

Committee Chair: Shawn LaBelle
Student Chapter Advisor: Chris Reilly

I want to wish the students a safe travel to Las Vegas, NV to attend the 2011 ASHRAE Winter Conference. We are fortunate enough to have 6 students attend this event. I want to thank the Champlain Valley Chapter, Lauri Sybel, and the VTC Student Council for sponsoring the students.

Thanks!

Thanks!
Shawn LaBelle

Treasurer's Report

As of today, January 13th, 2011, all bills are paid and our TD Bank checking account balance is \$15,190.63 - down from last month by \$2,5581.13 The reason for the lower balance is a combination of factors; one being us underwriting some of the student attendees at last month's dinner meeting; another being a few attendees that forgot their wallets that Peter Bailey is on top of - and yet another, our helping VTC students get to the ASHRAE Annual Meeting in Vegas with a modest expense reimbursement donation.

Our monthly meeting place, The Hampton Inn, continues to please. If you have any other opinions regarding the place, food, pricing or accommodations, please let Shawn or I know.

Ken Secor, Treasurer

VTC ASHRAE Student Chapter 2010-2011



Resource Promotion

By Sandy LaFlamme

We've reached and exceeded our Research and Resource Promotion Goal for 2010-2011!! We've received \$4,776 in donations to date which is 118% of our goal. This achievement is due to the generosity of those of you that have made investments and the \$1,931 donation by Hill Phoenix Learning Center. The Hill Phoenix Learning Center donated the entire cost of their recent refrigeration seminar to our RP Campaign efforts.

Pete Bailey organized the training that Hill Phoenix provided in November to over 50 technicians and engineers for our Chapter and he facilitated the large donation. The day long seminar was excellent and focused on DX refrigeration, refrigerant advances and standards, carbon dioxide emissions, green chill closed loop systems and the different ways to use glycol. Hill Phoenix was recognized by being awarded the plaque shown above. A press release was put out by Hill Phoenix which can be viewed on-line at www.hillphoenix.com.



ASHRAE Headquarters has recognized our Chapter and Pete's efforts and thanked CVC. ASHRAE plans to promote refrigeration technology and research efforts more in the future and this provides a nice success story to support their efforts.

We now have a chance to make our Challenge Goal of \$7,237. We're 66% of the way there. If you haven't yet contributed, please consider mailing a check, payable to ASHRAE Research Promotion, either to ASHRAE Research Promotion, 1791 Tullie Circle, Atlanta, GA 30329 or to Sandra LaFlamme, Efficiency Vermont, 255 South Champlain Street, Burlington, VT 05401. You may also donate on-line at: https://www.ashrae.org/aboutus/resource_promotion.asp.

February 9th Speaker

R. Christopher "Chris" Mathis has spent the past 30 years focusing on how buildings and building products perform – from energy efficiency to code compliance to sustainability and long-term performance durability.

Chris received his undergraduate degree in Physics from the University of North Carolina at Asheville. He received a Master of Science in Architecture Studies from MIT where his graduate work focused on energy use in buildings. He has served as a Scientist in the Insulation Technology Laboratory at the Owens-Corning Fiberglas Technical Center, was the Director of the Thermal Testing Laboratory for the National Association of Home Builders Research Center, and Director of Marketing for Architectural Testing, Inc., a private laboratory specializing in the performance of buildings and building products.

Chris has published a variety of technical papers on topics including: advanced test methods for insulation materials and wall systems; daylighting design and assessment techniques; off-peak cooling techniques for commercial office buildings; new residential and commercial energy codes; and metrics for environmentally preferable products. He has written numerous builder, architect and consumer-targeted articles and guides on building and product performance issues. His most recent publication is "Insulating Guide" - a book for home builders providing insulating best practices for many of the most common home building details. He is a frequent contributor to a number of building and consumer publications about a variety of building science topics such as window and insulation performance, energy efficiency, sustainability, code compliance and comfort issues. He is an active participant in Standards development at ASHRAE, NFRC and ASTM. He served 6 years on the Board of Directors of EEBA – the Energy and Environmental Building Association. Chris has been selected four times to serve on the International Energy Conservation Code Committee of the ICC, working to refine and improve the national model energy code.

Chris is also an on-going student of about 90

million years of sustainability and building science through his activities as a beekeeper. He lives and works near the farm he grew up on in the beautiful mountains of Western North Carolina.



R. Christopher "Chris" Mathis

- becomes a million "saved") This results in a common, yet totally irresponsible statement like, "This will result in the added million being paid back thru energy cost "savings." Since the basic premise does not take LOC into the equation, the "energy cost savings" conclusion is fundamentally flawed.

Conclusively, the model used to justify added costs green and super-efficient designs incur, is based on design data alone, not the reality of LOC (lost opportunity costs) or for that matter, the rebates that exist, usually without consideration of where the energy saving rebates come from. Before attempting to justify super-green, energy-saving designs, both these factors must be included in the model.

If a 5-million dollar green and super-efficient project could reduce it's initial cost by leaving one million on the table, not being financed with a commercial mortgage rate of ~7%, or, if no financing was involved - investing the unused million in a 20-year T-bill, with a guaranteed financial return of over 4% - an accurate energy cost savings calculation could be reasoned. Unfortunately, we are trained to examine designs, not economic reality.

We need to rethink and recalculate all the costs associated with investing in super efficient, cost saving technology and designs.

Besides the LOC (lost opportunity cost) elephant in the room, we need to consider the other one, namely, where do rebates and financial incentives for things like: cow power (farm based manure production of methane), high AFUE and SEER HVAC equipment, windmills, PV's, GSHP's, wood burners, etc. actually come from? Our head-in-the-sand mentality as to who ultimately pays for all forms of government rebates and tax credits is endemic. To a degree, the net cost reductions government rebates and incentive schemes are valid. The ugly reality no one wants to face however, is that the incentives and rebates the government provides, comes from only one place - your wallet and mine!

If greener and super-efficient designs are to be evaluated on an economic basis, we need all the financial data - including the two big pachyderms in the room!

© Ken Secor

THE TWO PACHYDERMS

While architects, engineers and design-build contractors stumble over each other trying to become greener, more efficient, touting net-zero energy-use buildings and the like - we need to stop ignoring fundamental economic principals that undermine these lofty objectives.

Take for example energy savings, financial projections our engineering and architectural journals cite in case studies that seem to result from "wondrously green" designs. These typically exaggerated and misleading operating cost "savings" avoid two very real financial costs.

In a business climate purportedly based on free markets, free enterprise and capitalism, all too frequently the financial impact of LOC (lost opportunity costs) are never mentioned. Yet, any school of business or economics teaches that without including this factor, all green and energy efficient models become distorted with regard to net, energy "savings."

Business schools define LOC as: "Those financial opportunities forgone in the choice of one expenditure over others." For example, if we invest 5-million dollars in a super-efficient green building that could have been built using standard (less efficient, less green) technology for 4-million, the added cost for super-green is 1-million dollars. Operating energy cost savings can occur but are frequently overstated by virtue of: Had the energy-saving million not been part of the mortgage, the interest on that million, over a 20-years of typical equipment life would "save" \$70,000 annually, or will become 1.4-million expense by the end of the 20-year life-cycle (not to mention the million not spent

Better Buildings by Design Conference Returns to Vermont

The region's premier design and construction conference returns to the Sheraton Conference Center in Burlington on February 9-10, 2011. Presented by Efficiency Vermont, the Better Buildings by Design 2011 conference will offer more than 35 presentations on approaches and technologies that are being used in today's energy-efficient homes and high-performance commercial buildings. Conducted by leaders in the industry, sessions will be featured in four simultaneous tracks on mechanical systems, lighting, building envelope, and innovations/high performance. More than 1,000 attendees are expected.

The keynote address, "Integrative and Regenerative Design: Redefining the Practice of Sustainability," will be given by Bill Reed, an internationally-recognized proponent and practitioner of sustainability. Mr. Reed will explore the idea that making buildings, cars, products, and processes more efficient is simply the starting point for achieving sustainability. He will address practical concepts of integrating technical and living-system design. As a principal in three firms, Mr. Reed has consulted on more than 200 green-design commissions and dozens of LEED projects and is a founding board member of the U.S. Green Building Council.

Workshop topics and presenters for the mechanical-systems track will include:

Commercial Building Re-Tuning; Overview & Key Operation Faults & Corrections Srinivas Katipamula, Pacific Northwest National Laboratory

Residential and Commercial Biomass Options

Averill Cook and Charles Agnew III, Biomass Commodities

HVAC and Power Supply Systems for Micro-Load Homes in a Cold Climate

Andy Shapiro, Energy Balance, Inc., and Bill Heigis of Bill Heigis, Builder

Getting a Mid-Size Solar Hot Water System to Operate Properly

Marc Rosenbaum, South Mountain Company

Ground Source Heat Pumps: Systems & Applications

Dr. Gary Phetteplace, GWA Research LLC

Chiller Optimization Using Refrigerant Flow Meter: A Case Study

Greg Dodge, DEI Dodge Engineering & Controls, Inc.

Downsizing Mechanical Systems after Retrofits

Skip Hayden, Integrated Energy Systems, CanmetENERGY

In addition to workshop sessions, conference participants will have access to more than 50 exhibits and demonstrations of cutting-edge, energy-efficient products and services for the construction industry. Also featured throughout the conference will be displays of construction and major-renovation designs receiving Efficiency Vermont's "Best of the Best" awards.

Conference participants will be able to earn continuing-education credits from a range of professional organizations, including the Association of Energy Engineers, the Association for Facilities Engineering, and the Construction Specifications Institute.

As in past years, the conference's popular Wednesday-evening reception will offer attendees the opportunity to connect in a casual atmosphere. This event will feature complimentary hors d'oeuvres, a cash bar, and more. All are welcome at the reception, free of entry charge, including those unable to attend the conference.

Groups registering four people will receive a free fifth registration. Special pricing is available for lodging accommodations at the Sheraton Burlington. For more information, visit www.encyvermont.com/conference or call 877-248-9900.



BETTER BUILDINGS BY DESIGN | 2011

February 9-10, 2011

Conference Center in Burlington, VT

www.encyvermont.com/conference

Mission Statement

ASHRAE will advance the arts and sciences of heating, ventilation, air conditioning, refrigeration and related human factors to serve the evolving needs of the public and ASHRAE members.

Vision Statement

ASHRAE

- ~ Will be the global leader in the arts and sciences of heading, ventilation, air conditioning & refrigeration.
- ~ Will be the foremost, authoritative, timely and responsive source of technical and educational information, standards and guidelines.
- ~ Will be the primary provider of opportunity for professional growth, recognizing and adapting to changing demographics, and embracing diversity.

Presidential Award of Excellence Totals

Presidential Award of Excellence (PAOE) is the point system ASHRAE Region and Society use to help track the Chapter's activities. The chapter gets points in the below categories for activities that we do throughout the year. The awards banner that you see at the meetings represents CVC's accomplishments over the years. Below are definitions of what some of those awards are. If you want to know more about PAOE check out the www.ashrae.org website and do a search for the 2006-2007 PAOE newsletter.

End of Year Awards Available to the Chapter:

PAOE: Minimum in five of the six categories

Special Citation: Minimum in 5 of the 6 categories with a minimum total of 4600 points

STAR: PAR in all categories

Honor Roll: PAOE for at least 4 consecutive years

High Honor Roll: STAR for at least 4 consecutive years

Premier: PAOE every year since the chapter's inception or since 1970; minimum of 4 years; chapter's first year is excluded

Sustainability Activities Award: A Chapter Sustainability Award in the form of a certificate is available for each chapter that obtains a total of at least 200 points from the items listed under Sustainability

Activities in the Chapter Operations category of PAOE. The Chapter with the highest PAOE Sustainability point total will receive a Regional award in the form of a glass plaque and a certificate. Level 1 = less than 100 members; Level 2 = 100-249, Level 3 = 250-449, Level 4 = 500 or more.

| Category | PAR | (2010-11) |
|----------------------|-------------|-------------|
| Membership Promotion | 800 | 760 |
| Student Activities | 500 | 445 |
| Technology Transfer | 850 | 150 |
| Research & Promotion | 1050 | 715 |
| History | 200 | 0 |
| Chapter Operations | 500 | 265 |
| Chapter TOTAL | 3900 | 2335 |

2009-2010 BOARD OF GOVERNORS

| | |
|---------------------------------------------|-------------------------------------|
| Pete Bailey T: (802) 434-2278 | Scott Alexander T: (802)655-7628 |
| Gretchen Langfeldt T: (802) 651-4114 | Dick Wilcox T: (802) 655-8805 |
| Sandy LaFlamme T: (888) 921-5990 x. 1097 | |

2009-2010 CHAPTER OFFICERS

| | |
|-------------------------|-----------------------------------------------------------------------|
| President | Shawn LaBelle T:(802)862-5900 x.146 shawn.labelle@vtmechanical.com |
| President- Elect | Mike Cook T:(802) 291-0911 mcook@arcmech.com |
| Vice President | Tom Dacres T:(802) 318-3298 tomd@vhv.com |
| Secretary | Nathan Mascolino T:(802)655-8805 x.148 nathanm@vhv.com |
| Treasurer | Ken Secor T: (802)309-5435 kpsecor@gmail.com |
| Administrator | Matt Tanis T: (802)860-4888 x.1228 mtanis@hallam-ics.com |

COMMITTEE CHAIRPERSONS

| | |
|-------------------------------------|-----------------------------------------------------------------------|
| Student Activities | Shawn LaBelle T:(802)862-5900 x.146 shawn.labelle@vtmechanical.com |
| Membership | Tom Dacres T:(802) 318-3298 tomd@vhv.com |
| Resource Promotion | Sandy LaFlamme T:(888)921-5990 x.1097 slaflamme@veic.org |
| Technology Transfer | Mike Cook T: (802) 291-0911 mcook@arcmech.com |
| Refrigeration | Pete Bailey T: (802) 434-2278 pfbailey@deicontrols.com |
| Historian | Gretchen Langfeldt T: (802)651-4114 glangfel@hotmail.com |
| Newsletter Editor/ Webmaster | Cara Gorman T: (802)777-9813 cara0773@gmail.com |

Subscription to the newsletter and membership questions should be directed to Tom Dacres (802) 318-3298 or tomd@vhv.com

Disclaimer Statement: Statements made in this publication are not expressions of the Society or of the Chapter and shall not be reproduced without special permission of the chapter.



Thomas C. Whitney, P.E.
Engineering Manager

Vermont Mechanical Incorporated
P.O. Box 728
Williston, Vermont 05495
Phone: 802-862-5900 Ext. 153
Fax: 802-254-1109
Tom.Whitney@vtmechanical.com
www.vtmechanical.com



Thomas F. Dacres, Jr. 16 Tigon St., Suite A, Winooski, VT 05404
Design Engineer 802.655.8805 **phone**
tomd@vhv.com ext. 152
802.655.8809 **fax**



Tom Zoller PE
Sales Engineer

Trane
Burlington Office
175 Leroy Road
Williston VT 05495
TEL 802 864 3816 FAX 802 864 5093
TEL 888 277 1497
Tzoller@trane.com
An American Standard Company

Thomas Engineering Associates

*HVAC, Plumbing, and Piping Systems Design
HVAC Systems Commissioning*

Glenn R Thomas, PE, CxA, LEED AP

PO Box 1420 4429 Main St., 2B (802) 583-1051
Waitsfield, Vermont 05673 (802) 583-1054 (fax)
glenn@TEA-VT.com (802) 343-4673 (cell)
www.TEA-VT.com

EST. 1970



THERMAL ENVIRONMENT SALES, INC.
11 SITTERLY ROAD • CLIFTON PARK • NEW YORK 12065

ERIK J. BRUHNS TEL (518) 373-1100
VICE PRESIDENT FAX (518) 373-1800
ENGINEERING SALES E-mail: ebruhns@teshvac.com




76 Bear Mountain Road • Bolton, VT 05676

JERRY CHABOT, P.E.
Principal

Phone: 802.652.0099
Fax: 802.434.6606
Mobile: 802.233.3503
Email: jerry@engvt.com

MANUFACTURER'S REPRESENTATIVE/DISTRIBUTOR
OF VARIOUS HEATING, VENTILATING
AND AIR CONDITIONING PRODUCTS

JOHN P. WHITBREAD
Sales Engineer



BUCKLEY ASSOCIATES, INC.
120 RAILROAD AVENUE
ALBANY, NY 12205
TEL (518) 438-7423 • FAX (518) 438-5527

HANOVER, MA NEWINGTON, CT MANCHESTER, NH



TECHNOLOGY PLUS
121 DRAHOS DRIVE
ALBANY, NY 12009
518-355-1178 FAX 518-355-1246
WWW.TECHPLUSLLC.COM

BRIAN SEXTON OFFICE 518-664-0012
EMAIL: BRIAN@TECHPLUSLLC.COM FAX 518-664-5378
CELL 518-320-2733

BOILERS • HYDRONICS • STEAM SPECIALTIES

We support the Champlain Valley ASHRAE Chapter

Hallam ICS

**ENGINEERING
COMMISSIONING & QUALIFICATION
CONTROL SYSTEMS INTEGRATION**

hvac
electrical
controls
clean spaces
specialties

www.hallam-ics.com

38 Eastwood Dr., Suite 200, So. Burlington, VT 05403 T 802.658.4891 F 802.658.1457

VERMONT MASSACHUSETTS NEW YORK NORTH CAROLINA VIRGINIA

Heather B. Ferrara
President

P: 802-264-1223
C: 802-734-4262
F: 802-264-1334
hbferrara@neair.com



New England Air Systems

Complete Mechanical Systems & Service

43 Krupp Drive PO Box 525 Williston Vermont 05495



JOHN F. GROUT

10 Benning Street, #168
W. Lebanon, NH 03784
Email: jgrout@victaulic.com

Cell: 508/878-9155
Fax: 610/923-3464



Representatives for Liebert - World Leader
in Computer Support Systems

DAN CONNELLY
Sales Engineer

Direct [315] 458-2877
Mobile [315] 529-3371
dconnelly@rlkistler.com

SPECIALISTS IN

- Computer Support Systems
- Precision Air Conditioning
- Precision Power Conditioning
- UPS Uninterruptible Power Systems
- Emergency Generators
- Laboratory Fume Hood Controls

EQUIPMENT FOR

- Air Conditioning/Air Handling
- Humidification/Dehumidification
- Fans/Blowers
- Cooling/Heating Coils
- Variable Speed Drives
- Energy Recovery

P.O. Box 374
N. Syracuse, NY 13212-0374
[315] 458-2875
Fax: [315] 458-2187
www.rlkistler.com



Alan E. Ouellet
Executive Vice President

15 Adams Street
Burlington, MA 01803-4916
Phone (781) 272-0060 X225
Fax No. (781) 272-0227

Cell Phone (781) 254-2442
E-MAIL aeouellet@filtersales.com
WEB SITE filtersales.com

FILTRATION SPECIALISTS



R.F. Peck CO., INC.
435 NEW KARNER ROAD
ALBANY, NY 12205

Phone (518) 869-3641
Fax (518) 869-5718
Email: mbronder@rfpeck.com

Mike Bronder
Sales Engineer

Manufacturer's Representatives for
Heating, Ventilating and Air Conditioning Equipment
— Visit our Web Page @ www.rfpeck.com —



TERRENCE R. REYNOLDS, P.E., C.E.M.
treynolds@controltechvt.com

78 Ethan Allen Drive
So. Burlington, VT 05403
Phone: (802) 860-1700
Fax: (802) 860-1799

Other Offices
Manchester, NH
Great River, NY

www.controltechinc.com



Robert G. Gatchell
HVAC Branch Manager; Northeast Systems
Building Efficiency

116 Railroad Avenue, Albany, NY 12205 USA
Direct 518 451 2723 Mobile 518 791 2692
Fax 518 451 2701 robert.g.gatchell@jci.com
www.johnsoncontrols.com

Printed on material from well-managed forests and post-consumer fiber; manufactured chlorine-free.



CXassociates^{inc} cx-assoc.com

110 Main St., Studio 1B, Burlington, VT **802-861-2715**
info@cx-assoc.com

- Building Commissioning
- Energy Analysis
- Measurement and Verification



ADVANCED COMFORT SYSTEMS

12B Commerce Drive
 Ballston Spa, NY 12020-3631
518-884-8444 x3402
 518-884-8411 fax
 518-701-4086 cell

rhickey@advancedcomfortsys.com
www.advancedcomfortsys.com

RAY HICKEY
 Sales Engineer

REGISTER TODAY!



**BETTER BUILDINGS
 BY DESIGN | 2011**

FEBRUARY 9 & 10
 SHERATON CONFERENCE CENTER
 BURLINGTON, VERMONT



877-248-9900 • www.encyvermont.com/conference

www.jwstevens.com **Cleaver-Brooks**
 Factory Authorized Sales, Parts, Service

Boilers
 Burners
 Controls
 Energy Projects
 Emissions Control
 Pumps
 Waste Water
 Water Softeners




JW STEVENS



A Blake Group Company

Sales • Service • Parts
800-536-8833(24/7 Service) 518-482-4549 FAX



Dodge Engineering & Controls, Inc.
*Actuators, Control Valves, Dampers, Flow Sensors and
 Patented Hybrid Refrigeration Systems*

Peter F. Bailey
 Northeast Regional Sales Manager

Regional Office:
 13 East Main Street
 Richmond, VT 05477
PFBailey@DEICcontrols.com
 Website: DEICcontrols.com

Tel. (802) 434-2278
 Fax: (802) 434-4150

Corporate Headquarters:
 Toll free (877) DEI-CTRL
 Fax: (978) 244-1422



Carrier
 turn to the experts

Chuck Kabrehl
 V.P. Commercial Sales & Engineering
ckabrehl@rjmurray.com

Dan O'Connor
 Commercial Sales Engineering
doconnor@rjmurray.com

7 Northway Lane, Latham, NY 12110
 79 Holly Court, Williston, VT 05495
518-690-4455 518-690-4990 (f)
www.RJMurray.com

Raymond M. Keller, P.E., CEM
 Energy Services Engineer
 LEED AP



Vermont Gas Systems, Inc.
 P.O. Box 467, Burlington, VT 05402-0467
 85 Swift Street, So. Burlington, VT 05403
 Tel: 802-853-4511 ext. 389
 Fax: 802-863-8872
rkeller@vermontgas.com

Vermont Gas
 CLEAN ENERGY.
 CLEAN AIR.