



the Champ

Monthly Newsletter of the CHAMPLAIN VALLEY CHAPTER OF ASHRAE

Serving Vermont Since 1969

PRESIDENT'S MESSAGE



While the weather outside is frigid and cold I would like to encourage our members to come to our upcoming winter meetings which are warm and insightful.

I would like to thank all the ASHRAE and other guests who attended January's meeting. Special thanks to

Ken Secor for volunteering to give a presentation on short notice. Ken's presentation on contract law and flat rate vs T&M billing strategies was well received by our members. We also were fortunate to have Susan Evans of Engineered Tax Services make the trip up from Boston to give a useful presentation on the utilization of the 179D Federal Energy Tax Deductions on projects we may be involved with.

I hope to see you all at our next meeting on February 1, 2012 beginning at 5:30 PM and will take place at the Hampton Inn in Colchester. February's program will feature an informational seminar on the Vermont Commercial Energy Code followed by a presentation on the National Life Group LEED, Existing Building silver accreditation project. Please mark your calendar for March 7 when our chapter will be hosting ASHRAE Distinguished Lecturer, Daniel Nall. Mr Nall will give two presentations, the first will discuss the ASHRAE Building Energy Quotient (bEQ) program and his second will be a discussion of the recently released Advanced Energy Design Guide focusing on 50% savings for small and medium offices.

Regarding the website, the new Champlain Valley Chapter website www.ashraevt.org is operational however we are continuing to make modifications and adjustments. Please bear with us while the improvements are under construction. I would like to encourage members to use the electronic RSVP available on the website to sign up for our monthly meetings.

A reminder to RSVP Ray Hickey (if not using the electronic RSVP) to coordinate head counts with the Hampton Inn to make sure there is enough food for everyone.

Wishing you all a Happy and Productive New Year!

Michael R. Cook
Chapter President

Join Us For Our Next Meeting

February 1, 2012

BOG Meeting 4:00 pm @ Hampton Inn

Technical Presentation @ 6:00 PM
(VT Commercial Energy Code & Compliance Plan Seminar)

Dinner @ 7:00 PM

Main Presentation @ 8:00 PM
(National Life Group LEED-EB silver accreditation Project)

contents

chapter reports

President's Message.....	1
Meeting Calendar 2011-2012.....	2
Technology Transfer.....	3-5
Membership Promotion.....	5
Treasurer's Report.....	6
BOG Meeting Minutes.....	6-8
General Meeting Minutes.....	8-9
Refrigeration.....	9-11
OneWorldTradeCenter.....	11-14
DOE Announces Guide For More Energy.....	14-15
Notice To Membership-Working Group Activity.....	15
2011 CRC Awards.....	16
2011 - 2012 Presidential Newsletter.....	16
PAOE.....	17
Chapter Contacts.....	17
Advertising/Sponsors.....	18-20

2011-2012 ASHRAE CVC MEETING CALENDAR

Feb. 2012
Vol. 26 No. 6

September 7	October 5	November 2	December 7	January 4
<p>Location: Hampton Inn</p> <p>4:00 pm: BOG Meeting @ VHV Offices</p> <p>5:30pm: Tour FAHC Boiler Plant</p> <p>7:00pm: Dinner @ Hampton Inn</p> <p>8:00pm: Presentation David Golen FAHC Boiler Room Plant Upgrades</p>	<p>Location: Hampton Inn</p> <p>4:00pm: BOG Meeting @ Hampton Inn</p> <p>6:00pm: Tech Session BMS and Lighting Controls Randy Mead CTI, C.E.M., CMVP, LEED AP</p> <p>7:00pm: Dinner @ Hampton Inn</p> <p>8:00pm: Presentation Utilizing a BMS in the Building Commissioning Process / John R. Butterfield, P.E. Hallam Associates</p>	<p>Location: Hampton Inn</p> <p>4:00pm: BOG Meeting @ Hampton Inn</p> <p>Membership Promotion Night and Joint Meeting with RSES</p> <p>6:00pm: Tech Session Overview on all Refrigerants Steve Friedman, PE, HFPD, LEED AP BD+C - Region 1 Refrigeration Chair</p> <p>7:00pm: Dinner @ Hampton Inn</p> <p>8:00pm: Presentation Milton Garland Award Winning Project Overview Featuring a CO2 Refrigeration System / Mark Cambria, P.E., LEED AP BD+C, CCP</p>	<p>Location: Hampton Inn</p> <p>4:00pm: BOG Meeting @ Hampton Inn (Joint Meeting with VGBN)</p> <p>5:30 - 6:30pm: Social Mixer</p> <p>6:30pm: Presentation Emerging Energy Modeling Tools Joshua W. Talbert, P.E., LEED AP BD+C Christopher K. Wilkins, P.E. Hallam-ICS, Director of Engineering</p>	<p>Location: Hampton Inn</p> <p>4:00pm: BOG Meeting @ Hampton Inn (Joint Meeting with AIA on non-HVAC topic)</p> <p>6:00pm: Contract Law & T&M vs Flat Rate Pricing and Billing Strategies</p> <p>7:00pm: Dinner @ Hampton Inn</p> <p>8:00pm: Section 179D Federal Energy Tax Deduction Seminar</p>
				<p>January 16 & 17</p> <p>Full day Seminar with Efficiency Vt/VGBN/ BED</p> <p>Energy Modeling in eQuest</p> <p>RP Fundraiser</p>
February 1	March 7	April 19	May 4	June 1
<p>Location: Hampton Inn</p> <p>4:00pm: BOG Meeting @ Hampton Inn</p> <p>6:00pm: VT Commercial Energy Code and Compliance Plan Seminar - By Tim Guiterman - Navigant and Barry Murphy -Vermont Department of Public Service</p> <p>7:00pm: Dinner @ Hampton Inn</p> <p>8:00pm: Life Group LEED-EB silver accreditation Project - By Tim Shea</p>	<p>Location: Hampton Inn</p> <p>TBD: BOG Meeting</p> <p>6:00pm: Tech Session DL Daniel Nall ASHRAE Building Energy Quotient (bEQ)</p> <p>7:00pm: Dinner @ Hampton Inn</p> <p>Presentation DL Daniel Nall</p> <p>50% Small and Medium Office AEDG</p>	<p>Location: TBD</p> <p>TBD: BOG Meeting</p> <p>VTC ASHRAE Club as Host</p> <p>Program 1:00pm - 4:00pm ASHRAE Webcast "DOAS - A Path to Balancing Energy and IEQ." 4:30pm Student Report on Chicago ASHRAE show 5:00pm Dinner 5:45pm Presentation on 2012 Student Design Competition Submission</p>	<p>Location: TBD</p> <p>TBD: BOG Meeting</p> <p>Membership Promotion Night</p> <p>Facility Tour – Proposed Magic Hat Digester</p> <p>Dinner – TBD</p>	<p>Location: TBD</p> <p>TBD: BOG Meeting</p> <p>Possible Green Technology Expo/product Demonstration?</p> <p>Details still in the planning phase</p> <p>Annual year end BBQ</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.

TECHNOLOGY TRANSFER

Thank you to everyone that came out for our January meeting, we had another great turnout and two very informative presentations. Thanks to both Ken Secor and Susan Evans for making us richer for having seen their presentations.

February's meeting promises to be equally educational with talks on the newly updated State of Vermont Commercial Building Energy Standards (CBES) Code and a lecture on National Life Group's environmental initiatives and their LEED-EB silver accredited building in Montpelier, VT.

First Presentation - 2011 State of Vermont Commercial Building Energy Standards (CBES) Code

By Tim Guiterman - Navigant and Barry Murphy - Vermont Department of Public Service

History

The CBES was enacted into law in 2006 (21 V.S.A. § 268). It is the energy code for all commercial buildings

and residential building 4 stories or greater above grade in Vermont, and took effect January 1, 2007.

On January 3, 2012 an update to CBES takes effect, which applies to all new commercial building construction, additions, alterations, renovations, and repairs. The 2011 Vermont Guidelines for Energy Efficient Commercial Construction will be made available as the energy code handbook; it is a standalone document for the State of Vermont based upon amendments to the International Energy Conservation Code® 2009 Supplement. The CBES also allows an alternative compliance path of ASHRAE 90.1 2009 with some Vermont specific requirements outlined in the energy code handbook.

21 V.S.A. §268 requires certification that both the design AND the construction of a commercial building is in compliance with the CBES. The design shall be certified by the primary designer; if a licensed professional engineer or a licensed architect is not involved in designing the project, certification shall be issued by the builder. The construction of a commercial building shall be certified as compliant with CBES by the party having primary responsibility for

coordinating the construction of the building, such as a general contractor or construction manager. In the absence of such a party, the owner must certify compliance. The certifying person may reasonably rely on one or more supporting affidavits received from subcontractors or others engaged in the construction or design of the commercial building affirming that the portions of the building constructed by them were properly certifiable. Certifications must be accompanied by affidavits certifying that the building was designed and constructed in substantial compliance with the requirements of the CBES.

To meet certification requirements, a CBES Certificate and a CBES Affidavit must be completed and sent to the Department of Public Service. Further, certification must be permanently affixed to the outside of the heating or cooling equipment, to the electrical service panel located inside the building, or in a visible location in the vicinity of one of these three areas.

Presenters

Barry Murphy is a Energy Programs Specialist for the Vermont Department of Public Service.

Tim Guiterman is a Managing Energy Consultant for Navigant Consulting Inc.

Main Presentation - National Life Group's environmental initiatives and their LEED-EB silver accredited building in Montpelier, VT.

By Tim Shea

National Life Group received a Silver Certification in Leadership in the Energy and Environmental Design, Existing Building (LEED-EB) program, sponsored by the U.S. Green Building Council. National Life is both the largest (543,992 sf) and the oldest (1960) building in Vermont to receive LEED certification of any kind is the second existing commercial building in Vermont to receive a silver LEED-EB certification.

Located in Montpelier, Vermont, the three-building campus was certified LEED-EB Silver based upon a review of documented best practices that met and exceeded high-performance and environmental requirements. Across the nation, LEED-EB is a benchmark for environmentally

responsible, energy efficient operations and maintenance in existing buildings. The LEED Green Building Rating System is consensus-based standard for the development of high-performance buildings, and is fully voluntary.

Among the many steps taken by National Life employees to make the building environmentally sound, the staff recycle 2,500 lbs. of paper and compost 2,500 lbs. on a weekly basis. Fully 73 percent of the company's solid waste is recycled, and more than 20% of employees use alternate forms of transportation to get to work. In addition, the building was also equipped with water-saving fixtures in the Main Building restrooms, energy-saving light ballasts and bulbs, a highly insulated membrane roof, and a 73 kilowatt photovoltaic system to power the campus.

Presenter

Tim Shea is currently the 2nd VP Facilities, Purchasing & Contracting at National Life Group (NLGroup) in Montpelier. He is responsible for the following areas: HVAC, electrical, plumbing, carpentry, furniture installation, roads and grounds, security, food service, janitorial, tenant relations, purchasing of all goods and services for NLGroup, and contracts negotiation of terms and conditions. Tim has been with NLGroup for six years and have implemented several environmental initiatives to include LEED-EB silver accreditation, solar photovoltaic system, solar thermal system, biomass boiler installation, revamped recycling program with over 76% diversion rate, and an alternate transportation program to incentivize NLGroup employees to use an alternate means to commuting. Prior to NLGroup, Tim worked in supply management and purchasing with Northern Power Systems, a renewable energy provider that installs wind and solar systems throughout the world.

Refrigeration Update

We are currently working with Hill PHOENIX at putting together another training day seminar this April for Contractors & Engineers. We will be sending out a survey for determining what Topic would best fit our group for training.

The topics are listed below:

1. Regulatory Trends and Updates, i.e. refrigerants, DOE 2012 (relates to display cases), etc.

2. CO2 product knowledge, last year we discussed using CO2 as a secondary fluid. The new trend that is becoming quite popular is cascade systems and transcritical systems.
3. Preventative Maintenance
4. VFD drives – how to keep them out of by-pass mode
5. ISTM series programs (Installation, Start-Up, Troubleshooting, and Maintenance) of any of the following: DX, Secondary, CO2, Walk-Ins or display cases.

Please contact Peter Bailey directly if you have a particular topic you would like to learn about at PFBailey@DEICcontrols.com

Peter Bailey - CTT Committee - Refrigeration

State and Federal Issues Update

You may like it, ...or you may not,... but it's here. The State of Vermont's new Commercial Building Energy Standard went into effect on January 3, 2012. Hard copies of the code have currently not been published and distributed, but an on-line "draft" of this code can be reviewed on the Department of Public Service CBES web page at: (http://publicservice.vermont.gov/energy/ee_commstandards.html).

The Department is currently in the process of developing an Energy Code Compliance Plan to achieve 90 percent compliance with VT energy codes by 2017. It is unknown as to when this process will be complete but our Chapter subcommittee will keep our Chapter Member's informed of the progress and provide additional details as they become available. For more information on this subject you may visit the Department of Public Service Energy Code Compliance web page at: (http://publicservice.vermont.gov/energy/ee_energy%20code%20compliance%20plan.html)

Dick Wilcox - CTT Committee - State and Federal

Hope to see everyone at the February Meeting!

Tom Dacres

MEMBERSHIP PROMOTION

Hello and happy New Year to all. Let 2012 bring good things to all and snow in the mountains.

I would like to welcome a new member to the Champlain valley ASHRAE chapter. Thank you Michael Skroski, I hope that ASHRAE is rewarding for you.

I would like to announce that our spring membership promotion night will be on the 4th of May. ASHRAE CVC will be hosting a facility Tour at the Magic Hat Brewery to view their Digester. If anyone has any ideas, or suggestions for any special events to be associated with our membership promoting please do not hesitate to contact me and pass them along.

The membership PAOE points have been updated and we are currently sitting at 115 points. That is a good place to be for this time of year.

I encourage everyone to log on to the new ASHRAE CVC web page (<http://www.ashraevt.org/>) to check it out. It's a work in progress, and is looking really good.

As always I will sign off with... If you are interested in sitting on the membership committee please contact me at nathanm@vhv.com

Nathan Mascolino

LEADERSHIP QUOTE of the MONTH

“The best executive is the one who has the sense enough to pick good men to do what he wants done, and the self-restraint to keep from meddling with them while they do it”

~ Theodore Roosevelt

TREASURE'S REPORT

As of today, January 12, 2012, all bills are paid and our TD Bank checking account balance is \$11,466 - up from last month by \$1,233. The reason for the increase? We haven't received January's meeting bill from the Hampton yet. It should be a tad less than the \$1,233 apparent increase, giving us a small boost in actual funds on hand.

Pete Bailey informs me a few expenses and deposits may be around the corner for the much anticipated Champlain Valley Chapter hosting of CRC-2013 and to that end, asked me to get started on creating new checking account dedicated to the income and outlay of that event. The Board has already sanctioned a new and separate account for that purpose and everything related to that event shall be posted to a new sub-account on our existing QuickBooks system. I will approach our bank next week

On January 4, 2012 I had the honor of being the pre-dinner meeting speaker. We covered a few legal issues, fundamentals regarding contract law and T&M billing vs. Flat Rate. All the comments seemed positive. I thank you for the opportunity, your indulgence, and especially the absence of any heckling or the discharging of weapons aimed in my direction.

Ken Secor, Treasurer

BOG MEETING MINUTES

January 4, 2012 BOG Meeting Minutes

Date: 01/04/2012
Location: Hampton Inn, Colchester VT
Time Called to Order: 4:34pm
Called to Order By: Mike Cook
Minutes Recorded By: Robert J. Favali, Secretary

ATTENDANTS

Mike Cook	ARC Mechanical
Ken Secor	KPS Consulting
Tom Dacres	VHV
Nathan Mascolino	VHV
Dick Wilcox	VHV
Rachael Mascolino	Efficiency Vermont
Robert J. Favali	DuBois & King, Inc

Peter Bailey Dodge Engineering Inc
Joshua Chiappone Johnson Controls Inc

LAST MEETING MINUTES

Motion to approve December 2011 Meeting Minutes as corrected was made by Ken Secor

Seconded by Tom Dacres

Carried

OFFICER REPORTS

President - Michael R. Cook

Mike led a discussion on the Nominating Committee and explained that the Committee will be presented to the membership for a floor vote at this evening's meeting. The Committee is required to provide a list of nominations to the Secretary by February 1, 2012 and will be published in the March newsletter. This was for information only and no action was required.

Mike discussed the status of the ad hoc Website Committee and the site's status in general. The work is on-going. Dick Wilcox (committee member) gave an updated report. Rachael Mascolino is the committee chair. The committee is meeting with Cara Gorman to update and improve the website. All comments on the website need to go to the committee.

A discussion then followed regarding how to establish this committee as a Standing Committee. Ken Secor requested from the committee chairperson members that they review the Chapter's Bylaws and provide a clarification on how to move this ad hoc committee to permanent status. This was for information only and no action was required

Mike then discussed the status of the membership and mailing lists. Rachael Mascolino gave an update and noted that (3) lists were created:

1. CVC Members in good standing
2. Region I members
3. Region I Presidents' List

Rachel noted that a list of CVC meeting attendees that are active participants but not members needs to be generated. She will also update the Newsletter and Meeting Notice mailing lists.

Mike led a discussion on the status of the YEOY and EOY submission. To date, we have not received any nominations from the Chapter. Mike suggested that we re-submit the names from last year (Amy Patenaude-EOY and Chris Riley-YEOY). The deadline for the State of Vermont nominations is January 16, 2012. The original deadline for a Chapter's nominations is January 16, 2012. After some discussion, it was agreed to move the Chapter's deadline to March 1,

2012. Each nominee sponsor's will be contacted again prior to submitting the nominee's name.

Mike gave an update on the planning for the summer Golf Outing. The outing's standing committee (John Grout, Tom Zoller, and Ray Hickey) has been working on the outing. The outing will be at Stowe Golf Club, August 1, 2012.

Mike then requested a motion to approve hotel and food expenses for our Chapter's ASHRAE Distinguished Lecture meeting on March 7, 2012. A motion was made by Ken Secor to approve a not-to-exceed amount of \$500.00 for expenses associated with March's Distinguished Lecturer Series. The motion was seconded by Nathan Mascolino and it was carried.

Finally, Mike noted that he made an executive decision to decline the opportunity to have an ASHRAE-CVC table at the upcoming VEIC/Efficiency Vermont energy efficiency conference. This was due to 1) no volunteers to work the table; and 2) a desire to limit Chapter expenses (cost for the booth). This was for information only and no action was required.

President Elect- Tom Dacres – CTTC Chair

Tom gave an update on the status of upcoming meetings. He noted that the April meeting at Vermont Technical College will be moved to April 19th in order to include the ASHRAE's DOAS (Dedicated Outdoor Air Systems) webcast in the meeting. He then gave a Memo of Understanding regarding our upcoming E-Quest Training to Mike Cook for signature.

Vice President – Nathan Mascolino - Membership Chair

Nathan requested his topics be tabled until next month.

Treasurer – Ken Secor

Ken noted that the latest Treasurer's Report will be updated for inclusion in the next Newsletter.

Chapter Secretary – Rob Favali

Rob noted that due to the time spent during the December BOG meeting on reviewing the website topic, the remaining monthly BOG meeting topics were not discussed. A follow-up meeting was held on Friday, December 16, 2011 at Trader's Dukes. The additional Meeting Minutes from the follow-up Meeting was recorded by Nathan Mascolino and are as follows:

Date of Meeting: 12-7-11

Call To order: Mike Cook at 3:33pm

Mike C

1. Mike reminded everyone to enter their PAOE points. He also discussed EOY and YEOY. Mike has the application/

nomination forms and will send them out via the email distribution list. There was open discussion and Tom D mentioned that we (ASHRAE) should re-submit the same people for EOY, and YEOY this year. The due date for the state is Jan 16, 2012. This issue was tabled until the next meeting.

2. Mike will announce in the newsletter that ASHRAE is looking for volunteers for society positions. Peter B is going to volunteer for the Regional Refrigeration position.
3. Mike reported that there are still nonprofit tables available. Rachael M confirmed that the price is \$425. There was discussion on if we should have a table at the conference. Mike will announce in the news letter that we are looking for volunteers to man the table, and send an email to membership. The decision was tabled until the next BOG meeting.

Tom D

1. Tom announced that the January speaker had canceled. Tom reported he had a few backup ideas but nothing was final yet. Rachael M is going to contact Tom outside of the BOG meeting to discuss some options.
2. The Apr meeting will be at VTC. Tom will contact Shawn outside of the BOG meeting to discuss.
3. Tom had nothing additional to report on.

Nathan M

1. Nathan reported that an updated member list (including email addresses) was provided to Rachael M. Issue was tabled until the next BOG meeting

Ken S

1. Ken reported that he and Peter B have started sharing information in an attempt to make as smooth as possible the transition from Ken S, to Peter B as the chapter treasurer.

Gretchen (Not in attendance)

Peter B

1. Peter made a motion to give a plaque to Bill A (Vermont Mechanical) for his efforts and financial support of the chapter web page. Ken S seconded the motion. Motion Passed.

Shawn L (Not in attendance)

Rob W.

1. Rob reported that he is at 71% of his yearly goal.

(A motion was made by Dick Wilcox to adjourn the meeting. It was seconded by Nathan Mascolino. The meeting adjourned at 4:46PM.)

History – Gretchen Langfeldt

Gretchen had nothing new to report;

Refrigeration – Peter Bailey

Pete noted that Hill-Phoenix is scheduled for another refrigeration workshop however the topic is TBD.

Student Activities – Shawn LaBelle

Shawn gave an update on the student’s attendance to the Chicago ASHRAE Conference. At this point, we understand that (5) students are going to the conference.

Research Promotion – Rob Ward

In Rob’s absence, Tom Dacres noted that we are at 76% of our RP Fund goal.

Old Business: None

New Business: None

MEETING ADJOURNED

A motion to adjourn was made by Nathan Mascolino and seconded by Dick Wilcox. It was carried and the meeting adjourned @ 5:45 PM

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

Rob Favali
Rachael Mascolino
Susan Evans
Todd Hallock
James Ashley
Carmine DeFeo
Joshua Chiappone
Michael Kirick
Ken Secor
Bill Gregory
Steve Dumas
Scott Alexander
Robert Trahan
Steve Kreigh
Clark Sweeney

Jason Hudspath
Nigel Churchhill
Tom Dacres
Nathan Mascolino
Martha Soule Holden
Rob Ward
Rick Hodgson
Jim LaVallee
Amy Poirier
Julie Viau
Kregg Kittell
Phil Bresnahan
Corey Griffiths
John Grout
Scott Sabol

Dubois & King Inc
Efficiency Vermont
Engineered Tax Services
F.W. Webb
Green Mountain Geothermal
Guy DeFeo Company
Johnson Controls
Kirick Engineering Assoc
KPS Consulting
L. J. Early Company
Liebert Engineering
LN Consulting
Mechanical Innovations
Mylan Technologies
Sweeney Refrigeration & HVAC Service
Thermal Environmental Sales
Vermont Heating & Ventilating
Vermont Heating & Ventilating
Vermont Heating & Ventilating
Vermont Heating & Ventilation
Vermont Heating & Ventilation
Vermont Mechanical Inc.
Vermont Mechanical Inc.
Vermont Mechanical Inc.
Vermont Mechanical Inc.
Vermont Mechanical Inc.
Vermont Mechanical Inc.
Vermont Mechanical Inc.
Vermont Mechanical Inc.
Victaulic Company
VTC Faculty

GENERAL MEETING MINUTES

January 4, 2012

Date: January 4, 2012
Location: Hampton Inn, Colchester VT
Minutes Recorded by: Robert J. Favali, Secretary

ATTENDANTS (41)

- | | |
|-----------------|------------------------------|
| Edward Murphy | A.M. Peisch & Co |
| Ray Hickey | Advanced Comfort Systems |
| Harris Unger | Advanced Comfort Systems |
| Mike Cook | ARC Mechanical |
| Brice Kosnik | Basix Automatiom Integrators |
| Matt Murphy | Blake Group |
| Randy Mead | Control Technologies |
| Mike Van Horn | Control Technologies |
| Nick Rock | Controls Technologies |
| Chris Vintinner | Controls Technology |
| Pete Bailey | Dodge Engineering |

TECH SESSION

Ken Secor gave a presentation on contract law and how to write an enforceable agreement between a contractor and an owner for small projects. He reviewed his experience in his business and how he addressed issues such as contract language, getting paid for your work, proposal writing, and taking discounts from wholesalers. The presentation concluded his presentation with a question and answer session.

GENERAL MEETING AND MAIN PRESENTATION

During the general meeting, President Mike Cook presented the names of the Nominating Committee to the floor for vote. These names were also presented at the December meeting. The Nominating Committee members are: Tom Zoller, Pete Bailey, Jim Lavallee, Jay Pilliod, and Joshua Chiappone. The floor voted and the nominations were carried.

Additional announcements were made during the meeting including a reminder of the upcoming e-Quest Training

Class. John Grout gave an update on the golf outing noting that it will take place on August 1, 2012 at the Stowe Country Club.

The main presentation was by Susan Evans, LEED AP, and Managing Director of Engineered Tax Services of Boxboro, MA. Her presentation was on Understanding the Federal Energy Policy Act and Benefits under IRS Section 179D. This presentation covered the history of the tax benefit, strategies of how to apply it with clients, and also gave examples of successful applications for both end-users and engineers. The presentation concluded his presentation with a question and answer session

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

REFRIGERATION

Energy efficiency in the ice rink
(Excerpted from The News - August 03, 2000)

It takes a lot of electrical energy to run an ice skating facility. A typical community arena can consume between 600,000 and 2,000,000 kWh per year depending on the location and facility operating profile. When you add potential demand charges and peak load penalties, the costs can skyrocket.

Through proper system design, steps can be taken to reduce the amount of power used while still maintaining high-quality ice.

The following are a list of some steps that can be taken to reduce the energy consumption in your facility.

Ammonia vs. CFCs/HCFCs/HFCs

Ammonia is the most energy-efficient refrigerant and is manufactured using natural elements, namely nitrogen and hydrogen (NH₃). It has been used successfully and safely for well over 100 years and will not be phased out like R-22.

However its toxic nature and pungent odor require that more stringent code regulations be adopted in the design of the plant room. When using ammonia, some jurisdictions require that a professional operator be on staff, which can increase the total facility operating cost.

For larger, multisheet facilities, you should strongly

consider ammonia for its increased energy efficiency advantage.

R-22 and -507 are more expensive and less efficient than ammonia. However, HCFC and HFC plant room and operator requirements are not as rigid as ammonia.

R-507 is also totally ozone friendly and probably will not be phased out, like R-22 will be.

R-507 operates at much lower compressor discharge temperatures than either ammonia or R-22. This can extend the life of the compressors. R-507 and R-22 compressors require less maintenance than ammonia compressors.

High-efficiency motors, soft-start controllers

It is always important to use motors with a high-efficiency rating. To increase the total system efficiency, soft-start controllers can be installed on the compressor motors. A soft-start controller greatly reduces inrush current and the consequential peak demand loads. The soft start also reduces the strain on the compressor during the high torque generated at start up.

Any reduction in your power bills as a result of using a soft-start controller will depend on the method used to calculate the demand load. Check with your utility company.

Power factor correction

Power factor is the relationship (phase) of current and voltage in ac electrical distribution systems. Under ideal conditions current and voltage are "in phase" and the power factor is 100%.

If inductive loads (e.g., motors) are present, power factors of less than 100%, typically 80% to 90%, can occur.

Low power factor, electrically speaking, causes heavier current to flow in power distribution lines in order to deliver a given number of kilowatts to an electrical load. Because the utility company must invest in oversized equipment to serve low-power-factor loads, a charge is commonly assessed on a facility's electric bill to recover the equipment costs and lost energy caused by low power factor.

Electric motors used to drive the refrigeration equipment commonly cause the voltage and current to get out of alignment. Power factor correction capacitors “re-align” the voltage and current with each other.

This is true with both fixed capacitors and automatic capacitor banks. These capacitors should be installed on all motors 25 hp and larger.

Computer control

The computer system applies a technique known as floating suction. It monitors the rate that the ice temperature is changing and selects just enough compressor capacity to accomplish the required cooling task while maintaining consistent ice temperature.

For every degree the suction pressure can be raised, the power can be reduced by approximately 1% to 1.5%. The computer can respond to any type of sensor, including slab sensors, brine sensors, in-ice sensors, and infrared sensors. The computer can be programmed to provide night setback to minimize running during unoccupied times; or, in areas with off-peak loads, the ice can be run down colder during periods with lower utility rates.

It is very cost effective to float the head pressure down during periods of colder ambient temperatures. Complicated formulas can be programmed into the computer to minimize the ratio of condenser fan to compressor horsepower. For every degree, the discharge temperature can be reduced by approximately 0.75%.

Dual-drive brine pumps

Dual-drive brine pumps allow a 60% reduction in pump horsepower by stopping the large main brine pump and starting a lower-horsepower pony pump.

The reduced-horsepower pony pump still provides 60% to 75% of the pumping capacity of the main pump. Calculations must be run to determine the reduced flow capacity of the chiller and the level of staging offered by the compressors.

In most cases, a very favorable hp/ton improvement can be obtained. In addition to the energy savings, you and the rink owners will have the added security of a backup brine

pump in the event of a failure.

Oversized evap condenser

Evaporative condensers are the most efficient method of condensing. Consideration should be taken for local water conservation regulations, health regulations, and the mineral content of the water to ensure that it is appropriate for your area.

It is always wise to select a condenser for the lowest condensing temperature that can be practically achieved. It is good design practice to size a condenser for a maximum of 90Å°F condensing at full-load conditions. For every degree you reduce the discharge temperature, the efficiency will increase by approximately 0.75%.

A dual-drive fan system will reduce the fan horsepower by 60% to 80% during reduced-load conditions and during colder weather. This format will also provide a backup in the event of a fan motor failure.

A variable-frequency drive (vfd) fan control can also provide excellent condenser efficiency. For optimum efficiency, a computer should control the drive. The programming will factor in the condenser load profile, a refrigerant table, and relative humidity.

Oversized flooded chiller

A properly engineered, oversized chiller will provide several benefits to the system:

- Suction pressures can be operated at a higher level, increasing refrigeration system efficiencies by 1% for every degree the suction temperature is increased.
- Pressure drops will be substantially reduced on the brine side, minimizing pump horsepower and destructive velocities.
- The additional size will minimize the negative effects of scaling, further increasing the life of the chiller.
- And the added surface area will facilitate rapid temperature pulldowns when required.

Titanium plate chiller

Titanium plate chillers offer five major advantages:

1. Optimum corrosion resistance;
2. Herringbone counterflow pattern that enables excellent heat transfer at greatly reduced flow rates, thus minimizing the required brine pump horsepower;
3. Reduced floor space requirements;
4. An exceptionally reduced refrigerant charge of 35 lb vs. 1,200 lb for a conventional flooded chiller of the same capacity; and
5. Ease of field service.

An oversized plate chiller can reduce energy requirements as well as facilitate rapid temperature pulldown when required.

Subcooling/snow melt pit

The entire electrical load in a refrigeration system is used to make ice; then, up to 20 times a day, the ice is scraped off and allowed to melt. Many facilities even use more power by melting the snow with hot water.

Traditionally, snowmelt pits obtained their heat from high-temperature discharge gas. On a CFC/ HCFC/HFC system, a subcooling system will preserve the high-temperature discharge gas for heating water, where it is more valuable.

The liquid subcooling method melts the snow and recovers the cooling value of it which, in turn, is directed right back into the refrigeration system for a capacity boost of up to 30%.

With a snow-melt pit, snow can be eliminated without opening the outside doors and letting heat in.

Hot water heat reclaim, desiccant dehumidifier

It is very economical to reclaim waste heat from the refrigeration plant for heating hot water.

Hot water in arenas is typically used for the showers or for filling the ice resurfacers. This does not eliminate the need for a supplemental boiler, but does drastically reduce the cost of operating it.

One of the largest contributing factors of having a great ice surface is proper humidity control in the building

envelope. Excess humidity also increases the refrigeration load on the ice plant.

The most reliable and economical way of dealing with the humidity is through the use of a desiccant dehumidifier. This provides an excellent ice surface during all weather conditions, at a fraction of the operating cost of the old-style mechanical dehumidifiers.

Diesel or gas compressors

In some locations, due to the availability or cost of electrical power, it may be favorable to operate one or all of the compressors with internal combustion engines.

In areas with time-of-day billing, it can be advantageous to operate the engine during peak electrical demand periods.

Additional heat reclaim is also available from the engine cooling system. Some gas companies offer significant grants for the conversion to gas. In deciding if this is a good option, you must calculate the additional cost of maintenance the engines will require.

ONE WORLD TRADE CENTER

There are green buildings, and then there are green buildings. A sustainably built and operated skyscraper is currently rising over the skyline of New York City, and it has more eyes on it than any high-rise building in human history.

Upon its completion in 2013, New York's One World Trade Center (colloquially known as the "Freedom Tower"), part of a complex currently under construction to replace and honor the World Trade Center Twin Towers and other buildings destroyed on September 11, 2001, will be the tallest building in the United States (Sorry, Chicago!) and one of the tallest buildings in the world. At the very top of the completed skyscraper, the radio antenna that will top the 400-foot spire will reach a symbolic height: precisely 1,776 feet high, in honor of the year of American independence. One World Trade Center, which will feature three million square feet of Class A office space alone (set on 71 floors dedicated for office use) will be accompanied by three other high-rise office buildings and the new National September 11 Memorial & Museum, located at the foot of One

World Trade Center. The museum was opened during memorial ceremonies on September 11, 2011.



One World Trade Center's progress as of December 2011. Source: PANYNJ

In addition to being tall and lovely, the building contains some not surprising cutting-edge safety features, including elevators that are housed in a heavily protected central building core, pressurized stairwells that are also built wider to accommodate handicapped building occupants in an emergency, protected “tenant collection” points on each floor, a dedicated stairway for use by fire and other emergency crews, and a specially designed emergency communications systems. An on-site police command center will serve the entire World Trade Center complex of buildings. The new safety standards actually exceed the requirements of the already-stringent New York City Building Code and are expected to become standard in the development of new high-rise buildings in that city.

But here are some things you may not know: once finished, One World Trade Center will be the most environmentally sustainable building of its size in the world. (Seven World Trade Center, which was completed and opened in 2006, was hailed as New York City’s first “green” office tower, but it will be dwarfed by its new companion tower.)

Designed by architect David Childs of Skidmore, Owings and Merrill, LLP, One World Trade Center will incorporate not only new architectural and safety standards, but new environmental standards as well, “setting a new level of social responsibility in urban design,” its makers say. Once completed to the U.S. Green Building Council’s LEED (Leadership in Energy Efficient Design) Gold standards (only one removed from Platinum, the most stringent standard),

One World Trade Center will set the global standard for sustainability, according to the New York Port Authority. (The completed Seven World Trade Center building has already been certified to LEED Gold.) For starters, the building’s designer intend for it to derive about 35 percent of its power from renewable energy sources. Once the building is fully operation, it’s expected to draw as much as 70 percent of its power from green energy: no small feat in a part of the world as densely populated as the New York metro area.

The building features a whole host of green elements, including:

Fuel cells. As of today, 12 United Technologies Corporation (UTC) Power PureCell Model 400 fuel cell stacks have been installed in the building. Ultimately, these fuel cells will provide 4.8 million watts per hour of clean energy when operational, and the combined systems will rank as one of the largest fuel cell installations in the world, according to UTC.

Waste steam recycling. Waste heat output from this fuel cell system will be recycled and used for hot water and heating in the podium of the building’s structure and the entrances, amounting to 70,000 BTUs of high-grade heat and 500,000 BTUs of low-grade heat. Alternatively, with the addition of an absorption chiller, the system is capable of using the waste heat to produce about 50 tons of cooling for the building, eliminating some need to draw power off the grid for air conditioning.

World-class mass transit. Workers commuting to One World Trade Center – and with millions of square feet of office space, there will be a lot of them – will have unprecedented access to mass transit service from the new complex. New climate-controlled corridors will connect the Freedom Tower to The World Trade Center Transportation Hub and the new PATH terminal, 11 NYC Transit subway lines and the new Fulton Street Transit Center, the World Financial Center and ferry terminal, underground parking and retail and dining facilities.

Exceeding code. Overall, the building’s energy performance will exceed code requirements by 20 percent, say its builders.

Recycled rainwater. Rainwater will be claimed and re-used for building cooling purposes as well as fire protection, supplemental cooling and irrigation for the complex's extensive landscaping needs. The rain water – 60 inches annually in New York, making it one of the rainiest of American cities – will be stored in new high-efficiency evaporative cooling towers located on-site.

Functional memorial. The large, square reflecting pools which mark the “footprints” of the original World Trade Center twin towers feature 360-degree waterfalls and serve as rain collection systems themselves. The names of those who died on September 11 are inscribed on plaques around the “footprint” waterfalls. The names appear dark during the day and glow with internal light at night.

Central chiller. Air conditioning will be supplied, in part, by a highly efficient 12,500-ton Central Chiller Plant (CCP) that uses water from the Hudson River to cool the WTC Transportation Hub, National September 11 Memorial and Museum, retail space and some non-commercial areas. The plant will circulate 30,000 gallons of river water every minute.

Landscaping. The new main plaza of the World Trade Center complex will feature more than 400 trees, all of which were harvested within a 500-mile radius of the city to avoid excessive transportation and limit the amount of greenhouse gas emissions. The trees' roots will help keep temperatures regulated within the museum that lies below.

Waste material recycling. Construction at the building site has been recycling about 80 percent of waste materials generated at the site, exceeding its own target by about 20 percent.

Recycled building materials. The new World Trade Center is already 75 percent “old,” at least in terms of materials. Everything from the facility's gypsum boards to ceiling tiles contains a minimum of 75 percent post-industrial recycled content. This reduces the environmental footprint, not only on-site, but reduces the stress on the natural resources and energy needed to produce them, says the tower's builders.

Taking a pass on cement. The construction of One World Trade Center used so-called “Green Concrete,” – what some believe to be more environmentally responsible than traditional cement – which will save about 12 million pounds of carbon dioxide emissions, 8 million kWh of energy and 30,000 gallons of fresh water. (It does, however, contain coal fly ash, which comes with some environmental challenges of its own.)

Renewable energy sources. The facility will make use off-site renewable wind and hydro power.

Clean diesel. During construction, contractors are being required to use only ultra-low sulfur diesel fuels, or “clean diesel” to reduce nitrogen oxide and particulate emissions in and around the construction area. In addition, all construction vehicles are equipped with extra particulate filters to further reduce their environmental impact on air quality.

No VOCs. Any use of materials that contain VOCs – volatile organic compounds, or chemicals that leach from building materials in gaseous form and cause health problems – has been banned from the entire reconstructed World Trade Center complex.

Preventing a “sick” green building. Indoor air quality will be continually monitored with a high-tech system. Carbon dioxide monitors will control ventilation and make the building healthier and improve indoor air quality. If the monitors sense more carbon dioxide than is healthy, they send a signal to the air handler software, telling it more fresh air is needed in that space. The system then automatically increases the fresh air mix in the area. The buildings contain over 3,000 points of monitoring, according to Eduardo Del Valle, Director of Design Management at One World Trade Center.

Daylighting. The buildings will use a green feature called “daylighting,” which means that on bright, sunny days when a large amount of natural daylight is coming into the windows, dimmers will automatically lower the interior lights to reduce energy consumption. Every space within 15 feet of the building's facade will be equipped with dimming devices. In addition, the buildings' windows are being constructed of ultra-clear glass, which will allow a maximum amount of light in while blocking excess heat from entering.

Green port-a-potties. During construction, workers are using composting toilets in place of the familiar, chemically smelly portable toilets. Essentially, their waste is being allowed to do what waste was meant to do: mix with other decaying biological products and create nutrient-rich soil. After workers make their “deposits,” the solid waste is channeled into a container half full of saw dust and worms: industrious and conscientious workers who quickly go to work turning the waste into composted soil. The water of urine is evaporated away, leaving only the faintest film of biological material. (Hope you weren’t eating lunch!) In addition to being more efficient, the toilets are smaller and easier to move than large chemical portable toilets: an important consideration when your workers need to answer nature’s call more than 1,500 feet off the ground. Once human waste – both of the liquid and solid variety – is fully processed, more than 90 percent of it is re-used, eliminating the need to constantly empty and re-plenish the water in traditional portable toilets. Workers have praised the system as far superior and less stinky to other high-rise bathroom arrangements.

Low-water bathrooms. Once completed, the building will contain high-efficiency plumbing systems designed to save thirty percent on water consumption over a typical building of its size. To achieve this, builders will install low-flow toilets and devices to limit water use for hand washing.

Save the ozone. Builders have barred the use of ozone-depleting HCFC refrigerants in the building’s mechanical systems.

Sustainable wood. Fully fifty percent of wood used in the buildings of the new World Trade Center was sourced from Forest Stewardship Council-certified (FSC) (www.fscus.org) sustainable harvested forests. FSC certification mandates that the wood used in a building project came from responsible sources and not from endangered trees or forests.

The construction of the new World Trade Center site – and in particular the One World Trade Center Tower – has not been without controversies. The building has been the topic of criticisms over delays (it had originally been slated to open this year; in 2008 the completion date was pushed to 2012 and is now scheduled for

opening in April of 2013), over-budget spending (the latest figure is over \$3 billion) and accusations of cronyism on the part of former New York Governor George Pataki, who was accused of using his influence to get the winning architect’s bid picked as a personal favor for a friend and campaign contributor. The design itself has been criticized, with petitions circulating that demanded the original World Trade Center Twin Towers be replaced. A media kerfuffle briefly erupted in May of this year when plans for the tower were displayed on the Web site of the New York City’s Department of Finance, with critics complaining the plans could be used by terrorists to attack the building.

The building’s designers and builders have a rather unenviable job in some ways: creating a new building that’s functional, modern, sustainable and unique while at the same honoring the memory of the buildings that stood there before and the people who perished in and around them. And while even the green components of the building have been criticized as overly expensive, these features will do more than save some water, some electricity and some emissions: they, together with the building they grace, will set an inspiring new precedent for skyscrapers for the twenty-first century.

DOE ANNOUNCES GUIDE FOR MORE ENERGY

January 10, 2012

The U.S. Department of Energy (DOE) announced the release of the third installment in a series of four 50% Advanced Energy Design Guides (AEDGs). This latest guide will help architects, engineers, and contractors design and build highly efficient retail buildings, helping to save energy and cut store operational costs. The 50% AEDG series provides a practical approach for designers and builders of retail stores, and other major commercial building types, to achieve 50 percent energy savings compared to the building energy code used in many parts of the nation. These commercial building guides support President Obama’s goal to reduce energy use in commercial buildings 20 percent by 2020. The Advanced Energy Design Guide for 50 percent energy savings in retail buildings is now available for download.

Beyond helping builders achieve efficiency exceeding the current energy code, the AEDGs also provide climate-specific recommendations to incorporate today's off-the-shelf energy efficient building products. These recommendations help designers and builders choose advanced building assemblies, highly efficient heating and cooling systems, and incorporate other energy-saving measures such as daylighting and associated control systems. Additionally, efficiency measures found in the guides can be used in the development of future commercial building energy codes.

The 50% Advanced Energy Design Guide series is being developed through a partnership with the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE), American Institute of Architects (AIA), U.S. Green Building Council (USGBC), and Illuminating Engineering Society of North America (IESNA). The Retail Buildings guide is the third installment in the 50% series, and follows the guides for small and medium office buildings and K-12 schools released in 2011. The final 50% savings guide for major commercial building types — large hospitals — is also in progress.

Notice To Membership – Working Group Activity

CVC Members:

The following email message was sent to ASHRAE CVC as a group whose members may have interest in the below mentioned working group activities. Interested members are encouraged to participate as individual professionals and not as official representatives of ASHRAE.

The Vermont Comprehensive Energy Plan which was released a few weeks ago contains a provision under Thermal Energy to include residential geothermal installations under PACE (Property Assessed Clean Energy) loan funding. Portions of the PACE loan funding are to be administered by Efficiency Vermont (EVT). Amy Patenaude of EVT has shared some draft language to the REV (Renewable Energy Vermont) geothermal working group which would recommend having these installations installed by IGSHPA Accredited Installers (AI) and designed by IGSPHA Certified Geo Designers (CGD). Fortunately there are 54 AIs in Vermont, but no CGDs. The Comprehensive Energy Plan also calls to “Create Vermont-specific GSHP installation standards and best practices through a stakeholder process.” Jim Ashley has suggested a stakeholder group deal with both the PACE residential project requirements and at least a simple residential geothermal installation standard in the next few months. Efficiency Vermont suggests this work be undertaken during the first quarter of this year and the expectation that the REV geothermal working group will take the lead, but that we need other stakeholders.

It has been recommended to hold the first meeting in early February in either the Burlington or Colchester area. The organizers will try to provide for telephone participation, and to try and create draft discussion documents before the first meeting. If you would like to participate, and/or can recommend stakeholders you think should be at the table? Let Jim Ashley know.

It is important to realize that whatever is developed will give direction to Vermont, but also the on-going tasks for the REV committee to work on and possible directions for NEGPA and the VTC certificate training program.

Anyone interested in participating in the stakeholder group, please contact Jim Ashley at: jashley@vermontgeo.com

2011 CRC AWARDS

Here are the (12) awards the Champlain Valley Chapter received at the 2011-2012 CRC in New York City on August 18-20, 2011.

- ▶ Champlain Valley Full Circle
- ▶ Champlain Valley PAOE – Honor Roll, Special Citation – Shawn LaBelle President and Star
- ▶ Champlain Valley Sustainability Activities PAOE – Shawn LaBelle President
- ▶ Champlain Valley Runner Up Research Promotion (% of goal)
- ▶ 2008-2009 History – Amy K. Patenaude
- ▶ 2009-2010 History – Gretchen Langfeldt
- ▶ Certificate of Achievement, Recognition for Exceeding Goal – Sandra LaFlamme
- ▶ 2010-2011 ASHRAE Region 1 Outstanding Performance Research Promotion Honorable Mention – Sandra LaFlamme
- ▶ 2011 Chapter Service Award – Thomas W. Zoller 2010-2011 ASHRAE Region 1
- ▶ Black Ink Award “The Champ” – Natasha Yaryna and Cara Gorman
- ▶ 2010-2011 ASHRAE Region 1 Best Student Design Competition, HVAC Design – Shawn LaBelle and VTC Student Chapter
- ▶ 2010-2011 ASHRAE Region 1 Outstanding Performance Chapter Programs Honorable Mention – Michael R. Cook

Congratulations to the efforts of the entire 2010 – 2011 Champlain Valley Chapter team including Of-

2011-2012 PRESIDENTIAL NEWSLETTER

2011 -2012 Presidential Award of Excellence (PAOE)

2011-2012 PRESIDENTIAL NEWSLETTER

DATE: May 16, 2011 (revised July 7, 2011)

TO: Chapter Presidents
ASHRAE Membership Promotion Committee,
ASHRAE Student Activities Committee, ASHRAE
Research Promotion Committee, ASHRAE Chapter
Technology Transfer Committee, Young Engineers in
ASHRAE Committee, Regional Historians, Assistant
Regional Chairs, Board of Directors

FROM: Ronald E. Jarnagin

SUBJECT: PRESIDENTIAL AWARD OF
EXCELLENCE (PAOE)

ASHRAE chapters are the backbone of this Society

and play a central role in helping the Society achieve its goals. Through our collective efforts, ASHRAE chapters are a vital force in the HVAC&R community and a resource for the global community.

My Presidential theme, “Sustaining ASHRAE Through Leadership,” highlights the role ASHRAE members play as leaders in sustainable design and practices.

This marks the sixth consecutive year that the Presidential theme has focused on sustainability. This focus should be so ingrained in our lives that our mission “to serve humanity and promote a sustainable world” inspires our daily decisions.

Several new activities have been added to support the presidential theme and they focus on Leadership, Training, Marketing, Young Engineers in ASHRAE (YEA), Building Energy Quotient (bEQ) and Refrigeration.

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	(2011-12)
Membership Promotion	800	115
Student Activities	500	0
Technology Transfer	850	450
Research & Promotion	1050	1025
History	300	0
Chapter Operations	600	275
Chapter TOTAL	4100	1865

2011-2012 BOARD OF GOVERNORS

Pete Bailey T: (802) 434-2278 Company: Dodge Engineering & Controls Inc pfbaily@deicontrols.com	Rachael Mascolino T: 802-488-7846
Robert Ward III T: 802-655-8805 x194	Dick Wilcox T: (802) 655-8805 Company: Vermont Heating @ Ventilation, Inc. dwilcox@vhv.com
Gretchen Langfeldt T: (802) 651-4114	Shawn LaBelle T:(802)862-5900 x.146 shawn.labelle@vtmechanical.com

2011-2012 CHAPTER OFFICERS

President	Mike Cook T:(802) 291-0911 mcook@arcmech.com
President- Elect	Tom Dacres T:(802) 318-3298 tomd@vhv.com
Vice President	Nathan Mascolino T:(802)655-8805 x.148 nathanm@vhv.com
Secretary	Robert Favali T: (802)878-7661 rfavali@dubois-king.com
Treasurer	Ken Secor T: (802)309-5435 kpsecor@gmail.com
Administrator	Mike Cook T:(802) 291-0911 mcook@arcmech.com

COMMITTEE CHAIRPERSONS

Student Activities	Shawn LaBelle T:(802)862-5900 x.146 shawn.labelle@vtmechanical.com
Membership	Nathan Mascolino T:(802)655-8805 x.148 nathanm@vhv.com
Research Promotion	Robert Ward III, T:802-655-8805, robw@vhv.com
Technology Transfer	Tom Dacres T:(802) 318-3298 tomd@vhv.com
Refrigeration	Pete Bailey T: (802) 434-2278 pfbaily@deicontrols.com
Historian	Gretchen Langfeldt T: (802)651-4114 glangfel@hotmail.com
Newsletter Editor/ Webmaster	Cara Gorman T: (802)777-9813 cara@ashraevt.org
2013 CRC	Tom Zoller T: (802) 864-3816 x2 TZoller@trane.com

Subscription to the newsletter and membership questions should be directed to Nathan Mascolino (802) 655-8805 or nathanm@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.



James D. LaVallee
Director of Business Development

Vermont Mechanical Incorporated
P.O. Box 728
Williston, Vermont 05495
Phone: 802-862-5900 Ext.158
Fax: 802-862-2219
Jim.LaVallee@vtmechanical.com
www.vtmechanical.com



A Mechanical Company

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



Tom Zoller PE
Account Manager

175 Leroy Road
Williston VT 05495
TEL 802 864 3816 TOLL-FREE 888 277 1497
FAX 802 864 5093
tzoller@trane.com
www.trane.com

Thomas Engineering Associates, PC

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

Glenn R. Thomas PE, CxA, LEED AP

PO Box 1420 (802) 583-1051
4429 Main St., 2B (802) 583-1054 (fax)
Waitsfield, Vermont 05673 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
VICE PRESIDENT
ENGINEERING SALES

TEL (518) 373-1100
FAX (518) 373-1800
E-mail: ebruhs@teshvac.com

Engenuity consulting, inc.

**Mechanical & Process Engineering
Energy Projects & Analyses
Commissioning & Start-Up**

802.652.0099 ■ www.EngVT.com

**MANUFACTURER'S REPRESENTATIVE/DISTRIBUTOR
OF 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
INTERNET: buckleyonline.com



HANOVER, MA NEWINGTON, CT MANCHESTER, NH



TECHNOLOGY PLUS

121 DRAHOS DRIVE
ALBANY, NY 12009
WWW.TECHPLUSLLC.COM

BRIAN SEXTON
EMAIL: BRIAN@TECHPLUSLLC.COM

OFFICE 518-664-0012
FAX 518-664-5378
CELL 518-320-2733

BOILERS • HYDRONICS • STEAM SPECIALTIES

Hallam ICS 38 Eastwood Dr., Suite 200
So. Burlington, VT 05403

*Engineering
Control Systems Integration
Commissioning*

TEL | 802.658.4891
FAX | 802.658.1457
TOLL FREE | 800.287.0800


info@Hallam-ICS.com www.Hallam-ICS.com

P: 802-864-3800
F: 802-864-3904
www.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


 **KISTLER**
R. L. KISTLER, INCORPORATED

Dan Connelly
5615 BUSINESS AVE. • CICERO, NY 13039

Direct (315) 458-2877
Main (315) 458-2875
Fax (315) 458-2187
Mobile (315) 529-3371
Email dconnelly@rlkistler.com
www.rlkistler.com

- PRECISION AIR CONDITIONING
- PRECISION POWER CONDITIONING
- EMERGENCY GENERATORS
- HUMIDIFICATION / DEHUMIDIFICATION
- FUME HOOD CONTROLS
- GREEN HVAC PRODUCTS



 **FILTER**
Sales & Service Inc.

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 aouellet@filtersales.com
WEB SITE filtersales.com

FILTRATION SPECIALISTS



Phone (518) 869-3541
Fax (518) 869-5718
Cell (518) 469-7072
Email: mbronder@rfpeck.com

R.F. Peck CO., INC.
22 COMPUTER DRIVE WEST
ALBANY, NY 12205

Mike Bronder
Sales Engineer

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

 **CONTROL
TECHNOLOGIES**
Putting you in Control

LEONARD PATTISON, C.E.M.
President
lpattison@controltechvt.com

121 Park Ave Suite 10
Williston, VT 05495
DID: (802) 764-2223
Cell: (802) 999-4282
Phone: (802) 764-2200
Fax: (802) 764-2299
www.controltechinc.com

Other Offices
Manchester, NH
Great River, NY
Woburn, MA
Anaheim, CA

 **Johnson
Controls**

Joshua Chiappone
Systems Sales Engineer
Building Efficiency

116 Railroad Avenue, Albany, NY 12205 USA
Tel 518 451 2709 Cellular 518 817 8669
Fax 518 451 2701 joshua.j.chiappone@jci.com
www.johnsoncontrols.com

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

REGISTER TODAY!



BETTER BUILDINGS BY DESIGN | 2012

FEBRUARY 8 & 9

SHERATON CONFERENCE CENTER
BURLINGTON, VERMONT



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

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



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

Vermont Gas
CLEAN ENERGY.
CLEAN AIR.

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

JW STEVENS



A Blake Group Company

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

Sales • Service • Parts

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


Robert J. Favali, LEED Green Assoc.
Director, Building Services




34 Blair Park Road - Suite 10
P. O. Box 1257
Williston, Vermont 05495

- ENGINEERING
- PLANNING
- DEVELOPMENT
- MANAGEMENT

Phone: (802) 878-7661
Cell: (802) 922-6909
E-mail: rfavali@dubois-king.com
Website: www.dubois-king.com



SINCE 1933
R. J. MURRAY
H.V.A.C. WHOLESALE DISTRIBUTORS
www.rjmurray.com




R. J. Murray Co., Inc.
H.V.A.C. Wholesale Distributor

Chuck Kabrehl
Vice President, Commercial Sales
ckabrehl@rjmurray.com
Direct Line: 518-690-4974 x106
Cell: 518-281-2461

7 Northway Lane
Latham, NY 12110
Phone: 518-690-4455
Fax: 518-690-4990

"Always A Better Value"

We Make Buildings... Great!




ADVANCED COMFORT SYSTEMS

12B Commerce Drive
Ballston Spa, NY 12020-3631
518-884-8444 ext 3410
518-884-8411 fax
518-424-5726 cell

hamsunger@advancedcomfortsys.com
www.advancedcomfortsys.com

Harris Unger
Sales Representative



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@DEIControls.com
Website: DEIControls.com

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

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



Brian Sager
Vice President/Designer/LEED AP

bsager@arcmech.com
www.arcmech.com

603-443-6111 802-222-9255 603-444-3440
Lebanon, NH Bradford, VT Littleton, NH