



the Champ

Monthly Newsletter of the CHAMPLAIN VALLEY CHAPTER OF ASHRAE

Serving Vermont Since 1969

PRESIDENT'S MESSAGE



I would like to thank the members who supported and attended our first HVAC product expo at the Champlain Valley Fairgrounds. The event was well received, the food was filling and tasty and everyone seemed to enjoy themselves. A

special appreciation goes out to Jim LaVallee and Phil Bresnahan who did their typical great job with the BBQ. To all the vendors who exhibited products and equipment and shared their knowledge and whose financial support by renting exhibitor space helped realize our chapter goals for research promotion this year the BOG sends its appreciation. Thank you, Efficiency Vermont for your generous sponsorship of coolers of ice cold refreshment for attendees throughout the warm afternoon. Lastly I personally acknowledge Rob Ward for his work in setting up and managing this end of year event, great job!

Our next scheduled event is the CVC ASHRAE annual golf outing which will be taking place at the Stowe Country Club on Monday August 6, 2012. An announcement for this event is included in this newsletter and a registration/sponsorship form is available on the chapter website. (www.ashraevt.org) I encourage you to mark this event on your calendars and share a fun afternoon with your fellow members and colleagues.

This will be my last newsletter as chapter president

completing this one year personal journey in public leadership. It is with heartfelt appreciation that I was accompanied on this journey with a dedicated group of officers and committee chairs who provided good advice, energy and most of all their volunteerism of time in making this year's technical, educational and social programs a success for which as a team can look back on with pride. The accomplishments of this year

Upcoming Events

Monday August 6, 2012

"Vegas" 2012 ASHRAE CVC Golf Outing at Stowe Country Club, At 12:00 PM

See Website for Registration/Sponsorship Form

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2011-2012 ASHRAE CVC MEETING CALENDAR

June 2012
Vol. 26 No. 10

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 9	June 6
<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>4:00pm: BOG Meeting</p> <p>6:00pm: Tech Session DL Daniel Nall 50% Small and Medium Office AEDG</p> <p>7:00pm: Dinner @ Hampton Inn</p> <p>8:00pm: Presentation DL Daniel Nall ASHRAE Building Energy Quotient (bEQ)</p>	<p>Location: VTC</p> <p>TBD: BOG Meeting APRIL 11 @ Efficiency Vermont</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: Shelburne Winery & Fiddlehead Brewing Company</p> <p>May 30 BOG Meeting - 4:00 PM at Efficiency Vermont</p> <p>Membership Promotion Night</p> <p>4:45 PM Shelburne Winery Facility Tour</p> <p>6:00 PM Fiddlehead Brewing Company Facility Tour</p> <p>7:00 PM Dinner - Folino's</p>	<p>Location: Champlain Valley Fairgrounds</p> <p>TBD: BOG Meeting</p> <p>Green Technology Expo/product Demonstration</p> <p>Annual year end BBQ</p> <p>Watch for future announcements</p>



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PRESIDENT'S MESSAGE

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include the development of a new website and the incorporation of social media connections. We have continued to promote the refrigeration sector of ASHRAE and promoting and highlighting high performance buildings and sustainability practices in our region. We have experienced engaging facility tours blending technical knowledge and social fellowship and finally we finished out the year with our first ever HVAC expo and BBQ. I hope you all have gained some knowledge and practical applications of the use of energy efficient products, technologies and tools like modeling software, controls and BMS in assisting you to help your clients achieve the energy efficient buildings necessary for our sustainable future. It has been a privilege to serve as President of ASHRAE CVC this year, I thank you for your continued attendance of chapter meetings and programs

and your camaraderie throughout the year. As we conduct our annual changing of the guard, I will continue to help and support Tom Dacres in his transition in leading our chapter next year.

Mike Cook

Leadership Quote of the Month

"Teachers can change lives with just the right mix of chalk and challenges"

~ Joyce A. Myers

"Teaching was the hardest work I had ever done, and it remains the hardest work I have done to date."

~ Anne Richards

TECHNOLOGY TRANSFER

I'd like to take this opportunity to thank all the vendors, product manufacturers, and attendees that made our first ever product expo and summer tailgate BBQ a HUGE success! A special thanks to Tom Oddy at the Champlain Valley Exposition. And Phil Bresnahan and Jim LaVallee and sons for putting together a great BBQ spread!

What a great year we've had for programs, education, and meetings. It's hard to believe the end of the ASHRAE year is here. It was a challenging and rewarding position and I wish Nathan Mascolino the best of luck for the 2012/13 year as the programs and CTTC committee chair.

A look back at 2011/12 ASHRAE CVC year..

I'd like to thank Dave Golen and Jim Goldsmith for the tour of the FAHC boiler upgrade project, Randy Mead for teaching us about networked lighting controls, and John Butterfield for the commissioning with BMS' seminar. It was great having Steve Friedman the Region 1 refrigeration chair visit us in November and talk about DX refrigeration and Mark Cambria for giving a wonderful talk on a Case Study of an ASHRAE Award Winning Supermarket. We mixed it up a little this year and had holiday mixer in December with our good friends at VGBN. Chris Wilkins and Josh Tabert gave a very interesting technical session on emerging energy modeling tools. We offered a 14 PDH credited training workshop on eQUEST and ASHRAE 90.1 energy modeling in January - Thanks to Jesse Robins and VGBN for co-sponsoring this workshop. We also held a full day seminar with Hill PHOENIX learning center on DX refrigeration installation, start-up, troubleshooting, and maintenance. Ken Secor started 2012 off with a bang with his lecture on Contract Law, this was a very well received talk, Thanks Ken! We followed Ken's talk with a class on Section 179D

Federal Tax deduction. February was one of our highest attended meetings with Talks on the VT Commercial Energy Code and Compliance Plan Seminar - By Tim Guiterman and Barry Murphy. Then Tim Shea presented on National Life Group's LEED-EB silver accreditation Project. March's meeting brought us ASHRAE Distinguished Lecturer Daniel Nall. Mr. Nall presented on ASHRAE Building Energy Quotient (bEQ) and the new ASHRAE 50% Advanced Energy Design Guides for Small and Medium Office Buildings and For Medium and Big Box Retail.) ASHRAE CVC presented yet another training opportunity to our members in April with the ASHRAE Webcast "DOAS - A Path to Balancing Energy and IEQ" live broadcast at VTC. The ASHRAE CVC student club gave us a presentation on their senior design project. Thank you VTC students! May brought us a tour of the Shelburne Vineyard and Fiddlehead Brewery with plenty of wood fired pizza (one of my favorite meetings of the year!). Finally taking us to last weeks' first ever BBQ tailgate style product expo. I'd say we had a pretty successful year!

Thank you very much to all the members that attended our meeting and events this year and I look forward to serving as Chapter President next year!

I hope See everyone on August 6th at the Stowe Country Club for our kick off to the 2012/13 year at our annual golf tournament.

Tom Dacres

MEMBERSHIP PROMOTION

The weather is warm, the sun is high in the sky and it is officially summer in Vermont! With that brings the end of the 2011-2012 ASHRAE year and on behalf of the entire membership

...continued on page 5

promotion committee I would like to thank everyone for a positive year. To date for the 2011-2012 ASHRAE year we have seen a net gain in our chapter membership of 5. That represents an increase of about 4%. June 30th is the last day of the ASHRAE year and by then the committee hopes to have at least 1 or 2 additional members.

I would like to thank all of the members who joined us for the trade show at the fairgrounds in Essex this month. I would like to extend a special thanks to all of the vendors who took the time and made the effort to be there. It was a most successful event and I am sorry for those of you who missed it.

The membership committee would like to recognize and welcome a new member. Thank you James Harrington for joining and supporting our chapter.

I hope that everyone is looking forward to an excellent summer. In closing I would like to wish Josh Chiappone the best as he will be taking over the role of membership promotion chair on the 1st of July. I will be moving on and stepping into the role of CTTC Chair.

Nathan Mascolino

RESEARCH PROMOTION

I would like to start by thanking everyone that was involved with our June event. It was a huge success. I owe a lot of credit to Tom Dacres for finding the perfect location and setting up our arrangement with the Champlain Valley Expo.

The “Grillers In The Mist” really put on a good spread. As usual Phil Bresnahan and Jim LaVallee did a fantastic job with the food.

At the very least I must acknowledge the vendors

that participated that really made the whole thing possible. Below is a list of the vendors in attendance in alphabetical order.

- EDOS
- Emerson Swan
- Freeaire
- Homans Associates
- J & K Sales Associates
- Johnson Controls
- Laars Heating Systems
- L J Early
- NE HVAC Solutions
- PFG Sales, LLC
- Tech Plus, LLC
- Thermal Environmental Sales, Inc.
- Trane
- Urell
- Victaulic
- Weil-Mclain

Thanks again for your participation and all the great raffle prizes that you brought with you!

I will not know until the end of the month where we ended up with our fundraising goal so you will have to wait for the next newsletter to see how well we did. Thanks again for a great year!

Rob Ward

TREASURE'S REPORT

As of today, June 11, 2012, all bills are paid and our TD Bank regular checking account balance is \$14,363 - up from last month by a stunning \$3,838. The reason for the substantial increase is four-fold. This is the time for membership renewal and ASHRAE National electronically transfers what they collect for us, into our account. The second reason is because of the credit Peter Bailey got us for the dysfunctional PA system we tried to procure, Thirdly, there is no monthly invoice for

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the Hampton. Instead, we had a tradeshow exposition and the BBQ providers work for nothing. And finally, Rob Ward did such an awesome job in getting vendors to fund this Research Promotion, Champlain Valley EXPO event, our income so far is in the 2K range, 3K more coming soon :)

Our TD Bank CRC-2013 checking account balance had no activity and remains at \$316.

The meeting between me and the new treasurer, Peter Bailey went well. We had lunch and hunkered down for a few hours over my computer and both are confident the transition, scheduled to occur on July 1, will be seamless.

My next report will be the last. I'll report on June's finances and let you know how the audit of my last fiscal year goes.

Finally, I'd like to thank the Board for the plaque in regard to my stewardship over the past three years. I'll continue to make meetings and take your pictures at various functions and events. If you'd like to take a peek at what's already posted, check out: <http://www.flickr.com/photos/60964393@N06/> There's close to 100 pictures to browse,

Ken Secor
Treasurer

STUDENT ACTIVITIES

VTC Chapter

Committee Chair: Shawn LaBelle

Student Chapter Advisor: Chris Reilly

Student Chapter President: Erin Fajans

I want to thank Professor Scott Sabol and the following students of Vermont Technical College for submitting their HVAC System Design to the ASHRAE Student Design competition:

Ashley Fernandes - Graduating May 2012 - BS Architectural Engineering Technology

Brad Park - Graduating May 2012 - BS Architectural Engineering Technology

Stephen Piro - Graduating May 2012 - BS Architectural Engineering Technology

The submission will be evaluated by the Region 1 Student Activities Vice Chair by the deadline date of June 2nd. If they pass regional judging their entry will be submitted to the national judging committee for final judging. This selection 1st, 2nd, and 3rd place winners in all categories by June 20, 2012. The winners will be announced on Monday August 4, 2013.

Thanks!
Shawn LaBelle

BOG MEETING MINUTES

May 30, 2012 BOG Meeting Minutes

Date: 05/30/2012

Location: Offices of Efficiency Vermont, Burlington VT

Time Called to Order: 4:12 pm

Called to Order By: Mike Cook

Minutes Recorded By: Robert J. Favali, Secretary

ATTENDANTS

Mike Cook	ARC Mechanical
Tom Dacres	VHV
Nathan Mascolino	VHV
Dick Wilcox	VHV
Rob Ward	VHV
Ken Secor	KPS Consulting
Rachael Mascolino	Efficiency Vermont
Peter Bailey	Dodge Engineering Inc
Joshua Chiappone	Johnson Controls Inc
Robert J. Favali	DuBois & King, Inc
Tom Zoller	Trane Company

LAST MEETING MINUTES

Motion to approve April 2012 Meeting Minutes was made by

Nathan Mascolino. Seconded by Rachael Mascolino; Motion carried

OFFICER REPORTS

A.) President: Michael R. Cook

a.) Mike discussed the installation of the officers. It was agreed that the installation will occur at the September 2012 meeting. The names of all positions are in the April minutes.

b.) The CIQ for 2012-13 will be submitted by Mike Cook on June 1, 2012.

c.) The 2012 Boston CRC (August 23-25) attendees are:

- 1) Mike Cook (required to attend)
- 2) Tom Dacres (required to attend)
- 3) Pete Bailey
- 4) Rob Favali
- 5) Nathan Mascolino
- 6) Rachael Mascolino
- 7) Tom Zoller

A motion was made by Ken Secor: "To allocate \$7,000.00 on a not-to-exceed basis to cover the attendee expenses for CRC."

Seconded by Nathan Mascolino

Motion Carried

d.) Mike noted that the Chapter's archives that are currently housed in the local Trane office needs to be relocated. Tabled for next meeting.

e.) Mike led a general discussion and reviewed the following items:

- 1) Reports and minutes need to be into Mike Cook and Cara Gorman by June 13, 2012.
- 2) Mike reminded that we need to continue to update of our PAOE (Presidential Award of Excellence) points before June 1st.
- 3) Tom Dacres noted that the July BOG meeting TBD.
- 4) Mike noted he spoke with John Grout on the status of the Golf Outing. The Outing is August 1st at Stowe Country Club.
- 5) No action on these items; for information only.

B.) President Elect- Tom Dacres – CTTC Chair

The June "Tailgate" event will be at the Champlain Valley Expo and is progressing well with (16) vendors currently signed up. (No action on these items; for information only)

C.) Vice President – Nathan Mascolino - Membership Chair

Nothing new to report

D.) Treasurer – Ken Secor

Nothing new to report

E.) Chapter Secretary – Rob Favali

Nothing new to report

F.) History – Gretchen Langfeldt

Nothing new to report

G.) Refrigeration – Peter Bailey

Pete noted he is in contact with Hill-Phoenix for another next presentation next year.

H.) Student Activities – Shawn LaBelle

Nothing new to report

I.) Research Promotion – Rob Ward

Nothing new to report

OLD BUSINESS:

None

NEW BUSINESS:

Tom Zoller gave an update on the planning for CRC-2013. The CRC Committee will be prepared to give a presentation at the 2012 Boston CRC. Additional planning continues. No action on these items; for information only.

Mike noted the need for a standard Meeting Announcement Template for each month. This was tabled until our next BOG meeting.

MEETING ADJOURNED

Motion to adjourn made by Dick Wilcox, Seconded by Tom Dacres. Motion carried. Meeting adjourned @ 5:44 PM

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

(amendments continued on page 8)

Amendment to the May 2012 Minutes
June 20, 2012

During the week of June 11, 2012 an email discussion occurred to address the distribution of the proceeds received from the June 6, 2012 expo.

On June 14, 2012, Rob Ward made a motion to have \$2,150.00 of the total proceeds received donated to RP Funds. It was seconded by Pete Bailey and a discussion followed.

During the discussion, Rachael noted that the advertisement for the expo indicated that all proceeds will go towards Research Promotion thereby making this motion incompatible with the advertisement.

Mike Cook reviewed the discussion we had at the May BOG meeting and confirmed that it was our intention to donate funds to RP to make sure it meets its "High Five" goal at a minimum. The balance of the proceeds was intended for the general fund. This suggests the advertisement was incorrect.

After much discussion it was agreed to revise the motion as follows by Mike Cook:

"Due to the success of the CVC HVAC product expo held on June 6, 2012 it is recommend that a portion of the income in the amount of \$2,150.00 be donated to ASHRAE Research Promotion as initially intended to allow Rob Ward, our Research Promotion Chair to attain the ASHRAE Research Promotion donation level of "High Five Award" and the remaining balance and any subsequent outstanding receipts be re-allocated back to the CVC chapter general fund."

The revised motion was seconded by Rob Favali.
The revised motion was carried.

GENERAL MEETING

WE THANK THE FOLLOWING LIST OF ATTENDEES FOR THEIR SUPPORT OF THE CHAMPLAIN VALLEY CHAPTER OF ASHRAE 2012 HVAC PRODUCT EXPO. WE HOPE YOU ENJOYED YOUR VISIT WITH OUR SPONSORING VENDORS.

Jim Moore	New England Air Systems
Charles Veronneau	CTI
Glenn Thomas	Thomas Engineering Assoc

Pete Gagnon	Thomas Engineering Assoc
Michael VanHorn	Control Technologies
Scott Alexander	LN Consulting
Ken Secor	KPS Heating & Consulting
Steve Kreigh	Mylan
Rachael Mascolino	VEIC, Efficiency Vermont
Ravi Parikh	Burlington Electric
Michael Cook	ARC
Maribella Ibarra	VEIC
Sheryl Graves	Vermont Energy
	Investment Corporation
Dick Wilcox	Vt Heating and Ventilating
Robert Favali	DuBois & King Inc
Pete Bailey	DEI
Rob Ward	VHV
Nathan Mascolino	VHV
Allen Tremblay	New England Air Systems
Tom Dacres	VHV
Martha Soule Holden	Vermont Heating & Ventilating
	Vermont Mechanical
Rick Hodgson	Vermont Mechanical
Eric Hodgson	Vermont Mechanical
Corey Griffiths	Vermont Mechanical
Shawn LaBelle	Vermont Mechanical
Jim Lavallee	Vermont Mechanical
Phil Bresnahan	Vermont Mechanical
Matt Dooley	VEIC
Ray Keller	Vermont Gas
Brian Fisher	Vermont Gas
Scott Harrington	Vermont Gas
Jared Kershaw	Vermont Heating & Ventilating
	VEIC/Efficiency VT
Howard Merson	Control Technologies, Inc.
Randy Mead	Control Technologies, Inc.
Nick Rock	Control Technologies, Inc.
Chris Vintinner	Burlington Electric Dept
John Lincoln	Buckley Associates
JOHN Whitbread	Buckley Associates
Paul Aspland	VHV
Nigel Churchill	Control Technologies
Justin Webb	State of Vermont
Bill Moore	

Steve Poole	VHV	John Planke	VHV
Andre' Morin	VHV	Ray Hickey	ACS
Allen Myers	VHV	Harris Unger	ACS
Alan Blow	VHV	Nick Meilleur	BTC
Taylor Christie	VHV	Mike Gary	Trojan Energy Systems
Chris Stanhope	VHV	Bob Morey	CVPS
Al Sutton	St. Michael's	Dan Eastman	Eastmen Benz
Ken Kretzner	St. Michael's	Chuck Rainville	Hallam Associates
Nick Wheelock	St. Michael's	Dan Gibbs	VHV
Derek Siegler	LN Consulting	Tylor	Basix Automation
Tim Valyou	VHV	Brice Kosnik	Basix Automation
Chip Roberts	VHV		

2012 HVAC PRODUCT EXPO PHOTOS





ASHRAE FELLOWSHIP PROGRAM NOTICE

Champlain Valley Chapter Members

ASHRAE would like to give notice to our membership for a unique and challenging opportunity for growth in Washington, DC.

ASHRAE is sponsoring a 12- to 18-month fellowship program with placement at the Department of Energy in the Office of Building Technologies, Building Energy Codes Program. This fellowship provides the traditional ASHRAE Member with exposure to the area of public policy. This assignment will enable a selected ASHRAE member to assist DOE in one of the following code deployment activities:

1. Code Compliance;
2. Residential Duct Test Training;
3. Assessment of the Impact of Updating State Energy Codes; or
4. Advanced Energy Code Training.

Federal government fellowships provide a valuable public service to the nation while, at the same time, providing engineers and scientists with a unique opportunity to participate directly in the policy-making process. This is an exciting, rewarding, and educational period in their professional careers. This enriching experience enables ASHRAE/DOE Fellows to bring back to their employers an insider's perspective on government decision-making that can contribute significantly to the mission and vision of the organization.

A couple of additional points to note:

- The fellowship requires living in or around Washington, DC for a period of 12 months, with the possibility of an extension for a second year.
- The fellowship will require reporting to DOE offices on a daily basis (i.e., a 40-hour work week).
- The individual selected must be a U.S. citizen.
- A stipend of \$74,872 gross (i.e., before taxes, etc.) will be provided by DOE.
- Health insurance reimbursement will be provided by DOE up to \$500 per month, with any monthly costs over that being paid for by the fellow.
- Ideal candidates will have a technical background, with 3-10 years experience in the building industry, as this is an early career development opportunity.
- The fellowship can begin as soon as a suitable candidate is selected by DOE.

If you believe you might be a good fit for this opportunity, please contact Doug Read, our Director of Government Affairs, at their earliest convenience.

Thanks for your attention – and we look forward to interest from our members to play an integral role in growing the relationship between DOE and ASHRAE.

Regards,
Mark Wills

Mark Wills, Manager - State and Local Government Affairs
Extension: 1003 Fax: 202-833-0118 eMail: MWills@ashrae.org

“VEGAS” 2012 ASHRAE CVC GOLF OUTING

CHAMPLAIN VALLEY CHAPTER of ASHRAE
“Vegas” 2012 ASHRAE CVC Golf Outing
Stowe Country Club (Stowe, VT)
Monday August 6, 2012 @ 12:00 NOON

Schedule:

Registration starts at 12:00 NOON, Shotgun start at 1:00 PM, box Lunch, and during the awards... finger food after golf.

Tournament Costs:

Foursome package includes, golf and food ... \$400 per foursome, 18 holes with cart, sleeve of balls, raffle ticket, fun with friends, and support of the CVC ASHRAE Research & Promotion

Tournament Format:

“Vegas” four ball best ball SCRAMBLE...putting contest at the turn...

Prizes: Vendors are encouraged to participate in the raffle prizes

Prizes for low team score, longest drive, putting contest, and closest to the pin
Vendor and Chapter raffle prizes

Tee Flags: Available to vendors, mechanical contractors, engineering firms, individual...
Still.....\$100 EACH!

Special Thanks to our last year sponsors:

Trane, Controls Technologies, Vermont Heating & Ventilating, Advanced Comfort Systems, R.L. Kistler, Victaulic, Thermal Environmental Sales, Buckley Associates, RF Peck, Milwaukee Valve, ARC Mechanical, Vermont Mechanical, F.W. Webb, Technology Plus, Efficiency Vermont, Independent Pipe Supply



CVC ASHRAE 2012 GOLF OUTING REGISTRATION/ SPONSORSHIP FORM

Monday August 6th, 2012 12:00 NOON Registration at Stowe Country Club

744 Cape Cod Road Stowe, VT 05672 www.stowecountryclub.com

TEAM NAME: _____

GOLF PACKAGE: Four golfers, 1 each raffle ticket, sleeve of balls, cart, food.

HOLE SPONSORSHIP: Tee-flag with your company's name placed prominently of the tee-boxes

ITEM	QUANTITY	COST	EXTENDED COST
TEAM OF GOLFERS	()	\$400 per team	()
HOLE SPONSORSHIP	()	\$100 per hole	()
MULLIGANS (four, one per each player)	()	\$25	()

TOTAL	()
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PLEASE CONSIDER THE CONTRIBUTION OF A RAFFLE GIFT (Gift Certificate)
Donations will be acknowledged during awards ceremony

PLEASE RESPOND VIA EMAIL, MAIL, or FAX NO LATER THAN JULY 20, 2012

PLEASE SEND FORMS TO RAY HICKEY rhickey@advancedcomfortsys.com
518-884-8411 Fax 518-701-4086 Cell

MAIL: Ray Hickey 12B Commerce Drive Ballston Spa, NY 12020

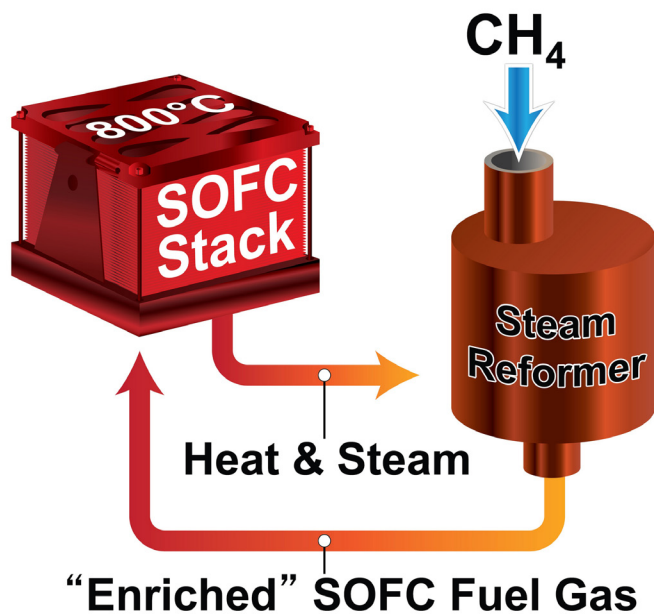
TEAM MEMBER NAME

Golfer #1 _____
 Golfer #2 _____
 Golfer #3 _____
 Golfer #4 _____

QUESTIONS????? John Grout 508-878-9155 or email jgrout@victaulic.com

NEW SMALL SOLID OXIDE FUEL CELL REACHES RECORD EFFICIENCY

(System designed for household and neighborhood power generation)



Pacific Northwest National Laboratory's new, small-scale solid oxide fuel cell system can achieve up to 57 percent efficiency partly because it uses a heat exchanger with PNNL-developed microchannel technology. Microchannels narrower than a paper clip are etched onto the heat exchanger's shim, which has been removed in this photo for illustrative purposes.

RICHLAND, Wash. – Individual homes and entire neighborhoods could be powered with a new, small-scale solid oxide fuel cell system that achieves up to 57 percent efficiency, significantly higher than the 30 to 50 percent efficiencies previously reported for other solid oxide fuel cell systems of its size, according to a study published in this month's issue of *Journal of Power Sources*.

The smaller system, developed at the Department of Energy's Pacific Northwest National Laboratory, uses methane, the primary component of natural gas, as its fuel. The entire system was streamlined to make it more efficient and scalable by using PNNL-developed microchannel technology in combination with processes called external steam reforming and fuel recycling. PNNL's system includes fuel cell stacks developed earlier with the support of DOE's Solid State Energy Conversion Alliance.

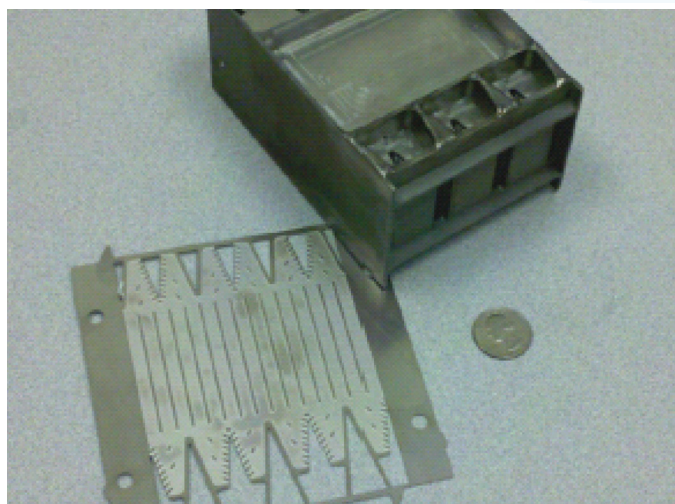
"Solid oxide fuels cells are a promising technology for providing clean, efficient energy. But, until now, most people have focused on larger systems that produce 1 megawatt of power or more and can replace traditional power plants," said Vincent Sprenkle, a co-author on the paper and chief engineer of PNNL's solid oxide fuel cell development program. "However, this research shows that smaller solid oxide fuel cells that generate between 1 and 100 kilowatts of power are a viable option for highly efficient, localized power generation."

Sprenkle and his co-authors had community-sized power generation in mind when they started working on their solid oxide fuel cell, also known as a SOFC. The pilot system they built generates about 2 kW of electricity, or how much power a typical American home consumes. The PNNL team designed its system so it can be scaled

May 31, 2012

Frances White, PNNL, (509) 375-6904

Pacific Northwest National Laboratory developed this highly efficient, small-scale solid oxide fuel cell system that features PNNL-developed microchannel technology and two unusual processes, called external steam reforming and fuel recycling.



up to produce between 100 and 250 kW, which could provide power for about 50 to 100 American homes.

Goal: Small and efficient

Knowing the advantages of smaller SOFC systems (see the “What is an SOFC?” sidebar below for more information), the PNNL team wanted to design a small system that could be both more than 50 percent efficient and easily scaled up for distributed generation. To do this, the team first used a process called external steam reforming. In general, steam reforming mixes steam with the fuel, leading the two to react and create intermediate products. The intermediates, carbon monoxide and hydrogen, then react with oxygen at the fuel cell’s anode. Just as described in the below sidebar, this reaction generates electricity, as well as the byproducts steam and carbon dioxide.

Steam reforming has been used with fuel cells before, but the approach requires heat that, when directly exposed to the fuel cell, causes uneven temperatures on the ceramic layers that can potentially weaken and break the fuel cell. So the PNNL team opted for external steam reforming, which completes the initial reactions between steam and the fuel outside of the fuel cell.

The external steam reforming process requires a device called a heat exchanger, where a wall made of a conductive material like metal separates two gases. On one side of the wall is the hot exhaust that is expelled as a byproduct of the reaction inside the fuel cell. On the other side is a cooler gas that is heading toward the fuel cell. Heat moves from the hot gas, through the wall and into the cool incoming gas, warming it to the temperatures needed for the reaction to take place inside the fuel cell.

Efficiency with micro technology

The key to the efficiency of this small SOFC system is the use of a PNNL-developed microchannel technology in the system’s multiple heat exchangers. Instead of having just one wall that separates the two gases, PNNL’s microchannel heat exchangers have multiple walls created by a series of tiny looping channels that are narrower than a paper clip. This increases the surface

area, allowing more heat to be transferred and making the system more efficient. PNNL’s microchannel heat exchanger was designed so that very little additional pressure is needed to move the gas through the turns and curves of the looping channels.

The second unique aspect of the system is that it recycles. Specifically, the system uses the exhaust, made up of steam and heat byproducts, coming from the anode to maintain the steam reforming process. This recycling means the system doesn’t need an electric device that heats water to create steam. Reusing the steam, which is mixed with fuel, also means the system is able to use up some of the leftover fuel it wasn’t able to consume when the fuel first moved through the fuel cell.

The combination of external steam reforming and steam recycling with the PNNL-developed microchannel heat exchangers made the team’s small SOFC system extremely efficient. Together, these characteristics help the system use as little energy as possible and allows more net electricity to be produced in the end. Lab tests showed the system’s net efficiency ranged from 48.2 percent at 2.2 kW to a high of 56.6 percent at 1.7 kW. The team calculates they could raise the system’s efficiency to 60 percent with a few more adjustments.

The PNNL team would like to see their research translated into an SOFC power system that’s used by individual homeowners or utilities.

“There still are significant efforts required to reduce the overall cost to a point where it is economical for distributed generation applications,” Sprenkle explained. “However, this demonstration does provide an excellent blueprint on how to build a system that could increase electricity generation while reducing carbon emissions.” The research was supported by DOE’s Office of Fossil Energy.

What is an SOFC?

Fuel cells are a lot like batteries in that they use anodes, cathodes and electrolytes to produce electricity. But unlike most batteries, which stop working when they use up their reactive materials, fuel cells can continuously

make electricity if they have a constant fuel supply.

SOFCS are one type of fuel cell that operate at higher temperatures - between about 1100 and 1800 degrees Fahrenheit - and can run on a wide variety of fuels, including natural gas, biogas, hydrogen and liquid fuels such as diesel and gasoline that have been reformed and cleaned. Each SOFC is made of ceramic materials, which form three layers: the anode, the cathode and the electrolyte. Air is pumped up against an outer layer, the cathode. Oxygen from the air becomes a negatively charged ion, O²⁻, where the cathode and the inner electrolyte layer meet. The ion moves through the electrolyte to reach the final layer, the anode. There, the oxygen ion reacts with a fuel. This reaction creates electricity, as well as the byproducts steam and carbon dioxide. That electricity can be used to power homes, neighborhoods, cities and more.

The big advantage to fuel cells is that they're more efficient than traditional power generation. For example, the combustion engines of portable generators only convert about 18 percent of the chemical energy in fuel into electricity. In contrast, some SOFCs can achieve up to 60 percent efficiency. Being more efficient means that SOFCs consume less fuel and create less pollution for the amount of electricity produced than traditional power generation, including coal power plants.

Sprenkle and his PNNL colleagues are interested in smaller systems because of the advantages they have over larger ones. Large systems generate more power than can be consumed in their immediate area, so a lot of their electricity has to be sent to other places through transmission lines. Unfortunately, some power is lost in the process. On the other hand, smaller systems are physically smaller in size, so they can be placed closer to power users. This means the electricity they produce doesn't have to be sent as far. This makes smaller systems ideal for what's called distributed generation, or generating electricity in relatively small amounts for local use such as in individual homes or neighborhoods.

REFERENCE: M Powell, K Meinhardt, V Sprenkle, L Chick and G McVay, "Demonstration of a highly efficient solid oxide fuel cell power system using adiabatic steam

reforming and anode gas recirculation," Journal of Power Sources, Volume 205, 1 May 2012, Pages 377-384, <http://www.sciencedirect.com/science/article/pii/S0378775312001991>

GREEN GLOBES TOPS LEED IN FEDERAL REVIEW, BUT BARELY

By Paula Melton

6/5/2012 UPDATE: GSA has pushed back the dates of the listening sessions. Please read below for more details.

5/11/2012 UPDATE: This article has been updated to incorporate comments from GSA, including opportunities for public comments that will influence the outcome of the review process.

After almost a decade of requiring LEED certification for all federal building projects, the U.S. General Services Administration (GSA) is suggesting in a new report that the Green Globes rating system aligns slightly better than LEED with federal requirements for new construction, while LEED remains the most compatible green building rating system for existing buildings.

The differences identified between the two systems are not marked, and the report acknowledges that apples-to-apples comparisons are difficult. The reviewers also claim the report "does not recommend a certification system," but repercussions remain to be seen; a similar report from 2006 was used to justify GSA's continued use of LEED.

To judge the "robustness" of green building certification systems, the reviewers compared federal guiding principles for building projects against features of three voluntary rating systems—Green Globes, LEED, and the Living Building Challenge—considering new construction separately from existing buildings. In keeping with the requirements of the Energy Independence and Security Act of 2007, the goal was to identify which systems allow projects to meet federal requirements with the least extra effort by project teams.

Findings regarding new construction

For new construction, Green Globes directly addresses the highest number of federal priorities—25 out of 27. However, as with all of the rating systems analyzed, project teams have to make an extra effort in several categories in order to meet federal guidelines.

- Although Green Globes has no prerequisites, optional credits helped the system match federal green building requirements more closely than those of any other rating system for new construction. Fifteen of these credits, however, would have to exceed the requirements laid out by Green Globes in order to match federal needs. Green Globes does not address two federal requirements at all: benchmarking and building system controls.
- LEED prerequisites guarantee compliance with four federal requirements (something Green Globes doesn't do at all), and optional credits provide compliance with seven more requirements. Nine credits would have to exceed LEED's requirements in order to meet federal standards. LEED does not address seven of the categories at all, though this could change with LEED 2012 (which in draft versions for example, addresses integrated design).
- The Living Building Challenge (LBC) has only prerequisites and no optional credits. Fourteen LBC requirements align to some degree with federal requirements, but there are thirteen others that LBC does not address.

Findings regarding existing buildings

While hinting that Green Globes may be preferable to LEED for new construction, the report several times reiterates the importance of measured performance after occupancy and deems LEED for Existing Buildings: Operations & Maintenance (LEED-EBOM) to be the most comprehensive of the three rating systems analyzed for meeting federal requirements.

- Optional credits in Green Globes would help projects meet eight federal requirements for existing buildings.

Green Globes does not address six federal requirements at all.

- LEED addresses 27 of the 28 mandates, making it the best match for existing buildings, but performance would have to exceed LEED credit requirements in ten areas in order to meet federal needs. According to the review, LEED does not touch directly on one area of concern, greenhouse gas emissions (although the Emissions Reduction Reporting Credit arguably addresses this).
- Seventeen LBC requirements map with federal priorities, but the system does not address 11. "Relatively negligible"

"Obviously none of the rating systems clearly aligns with the federal mandates, because federal mandates are more extensive and more comprehensive," said Brad Schaap, P.E., director of sustainability at Leo A. Daly. Schaap characterized the differences among the rating systems as "relatively negligible," adding that decisions must be made on a project-by-project basis. His firm, which has worked on many federal projects, has used both LEED and Green Globes and found no clear pattern of alignment with legal requirements.

"We use both as a tool," Shaap told EBN. On a project currently being completed for the Veterans Administration, for example, "for about 20 of the mandates we're just printing out the LEED documentation, and we have a supplemental narrative where LEED doesn't go to the extent of the federal mandate." Green Globes documentation can be used just as easily to demonstrate compliance, he said, meaning that either rating system "saves taxpayer money" by clarifying the scope of work and streamlining the submittal process.

The future of LEED for federal projects

GSA has required LEED Gold certification for building projects since December 2010; the implications of this review remain to be seen. According to Joni Teter, project lead for the rating system review, next steps will include six meetings of an interagency discussion group. Although GSA is focused on federal performance

targets, the agency is well aware that it also “has a role in market-shaping,” Teter told EBN, so GSA will also be hosting listening sessions with stakeholders in the private sector. The first will take place June 25, 2012, at GSA headquarters in Washington, and the second, which will be a webcast, is slated for July 10. She expects GSA to make a final recommendation in the fall.

Lane Burt, director of technical policy at the U.S. Green Building Council (USGBC), has so far seen no indications that the LEED Gold requirement is likely to change. However, he said, “They are going through the process of re-analyzing, which we fundamentally think they should do.”

Burt emphasized the importance of periodic review and the complexity of the analysis required, adding that “LEED is being developed as a voluntary system for the private sector, so it shouldn’t shock anyone that it’s not a perfect match for federal guiding principles.” However, he continued, “As a whole, the rating system maps quite well with federal guiding principles. It was overwhelmingly positive.”

The big picture

“There is an emphasis in this document on looking at existing building stock,” said Schaap. “Existing buildings are obviously where the focus needs to be for substantial change in a sustainable built environment.” Schaap and many of Leo A. Daly’s federal clients are focused on meeting the 2030 Challenge—targeting carbon neutrality by the year 2030.

“We can’t get there today very easily, but we can continually improve,” Schaap said. “It all goes back to measuring the performance of our designs and learning from what we find. That’s the best way to continue the advancement of sustainable design.”

For more information:
U.S. General Services Administration
<http://www.gsa.gov/gbcertificationreview>

FORGET BIG-BOX STORES. HOW ABOUT A BIG-BOX HOUSE?

by Deena Prichep

May 30, 2012 (Morning Edition) — Using recycled materials is increasingly common in building construction. But some architects are taking the green movement a step further, creating entire homes and businesses from discarded shipping containers. They call it cargotecture.

When it comes to architecture, sustainability and affordability can mean many things: Salvaged wood becomes new flooring, old newspapers are shredded into insulation.

But a few architects are taking green building one step further: creating entire homes and businesses out of discarded shipping containers — an approach some have dubbed “cargotecture.”

Approximately a quarter-million shipping containers pass through Oregon’s Port of Portland each year. These are big boxes — 40 feet long and weighing thousands of pounds.

“As you look across the container terminal here, they look like giant, multicolored Legos stacked up out there,” says port spokesman Josh Thomas. Each one is full of cargo moving in or out of the Portland region.

Shipping containers are ubiquitous on trucks, trains and ships today; about 20 million pass through American ports each year. But as critical as they are to modern life, the containers date back fewer than 60 years.

“We started to see containerization,” the freight shipping system based on the boxy containers, in the 1950s, Thomas says. “And since then, increasingly, just about anything that can be shipped inside of a container is.”

But traveling so many miles takes its toll, and eventually the containers are retired. Some are melted down, and

some sit around old lots.
And some become buildings — like taquerias.

Portable Buildings With A Story

The southeast Portland restaurant Aprisa Mexican Cuisine is one of them. Kirk Lance bought the old container that houses the restaurant for \$2,500. He worked with architects and structural engineers to overhaul the steel frame, spray in insulation and cut out windows.

“There’s no construction methods that are extremely intricate or technical,” Lance says. “Other than getting the blueprints permitted through the state of Oregon,” he adds. “That was technical. But the construction itself? Fairly simple.”

A cargo-based business is flexible, as well. It can be hauled to a new location or loaded on a cross-country train to set up a new franchise.

But for Lance, cargotecture was about more than just portability.

“This thing, it’s had a life,” Lance says. “It was born somewhere, and it’s traveled the world and hauled millions of pounds of who-knows-what. And it ends up as a little restaurant in a street corner in Portland, Ore.”

The buildings are popping up elsewhere, as well. Cargotecture designs have been used for student housing in Amsterdam and a pop-up art studio at New York’s Whitney Museum.

A Seattle firm, HyBrid Architecture, has used shipping containers to build cargotecture one-room cabins and multistory office parks.

HyBrid co-founder Robert Humble says the containers pose some specific challenges: They have industrial paints and coatings to deal with, and they’re just steel boxes with no real frame. But essentially, he says, it’s a building material.

“The mechanical equipment, the plumbing, the

electrical, is really quite traditional,” Humble says. “But it is that wrapping in a container that allows the house to be so portable, so flexible and overtly sustainable on the outside.”

Like many in the cargotecture movement, HyBrid emphasizes that sustainability in its designs. The company leaves on the original stickers, longshoreman’s marks, and all the other little dents and dings that, as Humble describes it, tell people the story of where the containers have been.

“They can imagine the container on a ship, they’ve seen it on a truck, and they kind of take an emotional journey with that container,” Humble says. “And finally, it’s at rest, and they can live in it.”

‘Better Than A Lot Of Apartments’

As Nick Radecki and Kelly Cook do. They rent a bright turquoise house made from two welded-together shipping containers in southeast Portland.

“It’s a big bathtub — shower up in the ceiling, pedestal sink, nice window,” Radecki says, showing off the bathroom. “It’s better than a lot of apartments.”

Cook, Radecki’s wife, initially took some convincing. And the couple has had to deal with the pros and cons of an open floor plan, as well as curious people who stop in to ask for a tour.

But the couple likes that the home is recycled. And ultimately, Radecki says, it’s a good house.

People often say they want a green house, Radecki says, but “truth be told, the only green home is a well-built home.”

Although with two young boys, two dogs and a cat, Cook and Radecki both admit it may not be long before they outgrow this particular piece of green cargotecture.

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Source: NPR

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	415
Student Activities	500	1031
Technology Transfer	850	1300
Research & Promotion	1050	1305
History	300	300
Chapter Operations	600	1250
Chapter TOTAL	4100	5601

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