

Capital Communiqué



ASHRAE - AMERICAN SOCIETY OF
HEATING, REFRIGERATING AND AIR-CONDITIONING ENGINEERS

<http://www.ashrae.ottawa.on.ca> OTTAWA VALLEY CHAPTER e-mail:contact@ashrae.ottawa.on.ca

2009 - 2010

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Georges Maamari

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Jason Alexander

Table Top

Frank Bann

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Roster

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PAOE

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Business Cards

Rod Lancefield

Nominations

David Eastwood

CRC Action

Jason Alexander

EVENING PROGRAM

DATE:

Tuesday **March 16, 2010**. **Career Fair: 13:30** – Technical Session: 16:30 - Social: 17:30 Dinner: 18:30
Program: 20:00 Travelodge Ottawa Hotel & Conference Centre, 1376 Carling Avenue, Ottawa, Ont.,
613-722-7600

THEME

STUDENT ACTIVITIES

TECHNICAL SESSION

“ANTHROPOGENIC GLOBAL WARMING – DIFFERING PERSPECTIVES”

A different approach to the usual formal presentation on these topics will be presented. It is the consequence of attempting to analyze the available data to demonstrate the reality of anthropogenic global warming. Unfortunately the analysis led to the conclusion that the only reality is in the uncertainties of these areas. A review of the data and predictions from climate change models will first provide evidence as to the culpability of CO₂. Following that, through careful analysis of the data, consideration of solar and astronomical large scale effects, and the nature of computer modeling, the second perspective will raise serious doubts on the culpability of CO₂ as a greenhouse gas threatening the welfare or even survival of future generations. The closing message will be a challenge to always “think as engineers”.

PROGRAM

ASHRAE'S CORE VALUES AND THEIR IMPLICATIONS

The five core values adopted by ASHRAE (advancement, leadership, integrity, service and excellence) can be excellent stimulants in our chapters, employment, and personal lives. The purpose of core values and their relationship to strategic planning will first be presented. In turn the characteristics of each of the five core values will be outlined, and then their relationship to ASHRAE's Code of Ethics and our own corporate and individual lives will be addressed. The presentation will end with a challenge to consider the "so what?" of it all.

SPEAKER

VICTOR W. GOLDSCHMIDT, Ph.D.

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EVENING PROGRAM (CONT.)

BIOGRAPHY:

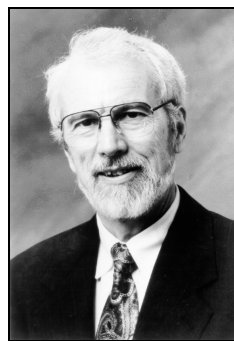
VICTOR W. GOLDSCHMIDT, Ph.D.
Professor Emeritus, Purdue University
School of Mechanical Engineering
Northport, MI
ASHRAE Distinguished Lecturer

Victor W. Goldschmidt, Emeritus Mechanical Engineering Professor, served at Purdue University from 1964 through 2000. He is currently serving as a Leelanau Township Trustee and Planning Commissioner as well as a facilitator and engineering consultant.

During his 36 years at Purdue University, Mr. Goldschmidt was responsible for educating mechanical engineering students, including the direction of graduate research in the HVAC area. Most of his service with graduate students was with the Ray W. Herrick Laboratories with heavy support from the HVAC industries. During early stages of his career, he served as Director of the Engineering Purdue Fellows in Latin America; during later stages he served as department head for Freshman Engineering. Prior to his academic involvement, he worked in Applications Engineering and Development Engineering with Honeywell.

Mr. Goldschmidt has taught almost every course in thermal sciences offered at Purdue, as well as a special upper level technical course on the “Creative Process in Engineering.” He is trained as a Synectics (special brainstorming) facilitator and is currently engaged in the development of strategic plans and problem solving sessions.

A past ASHRAE Director-at-Large, he also has served as a member of Publishing and Technology Councils. He is an ASHRAE Distinguished Service Award recipient and Fellow, as well as Honorary Member of IIR, ACAIRE, ASURVAC and AAF. He resides in North Michigan, above Traverse City.



Menu

Assorted Rolls and Butter, Crisp Green Salad
Tortilla Crusted Tilapia served with Rice Pilaf and Seasonal Vegetables
Cheese Cake with Strawberry Coulis, Coffee & Tea

Chapter Members: \$35.00 Guests: \$50.00

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President & CRC Delegate



President's Message

By Jason Alexander, P.Eng.
 2009-2010 OVC President

Recently, your Board of Governors and Executive had an internal meeting to discuss the membership. As a chapter we have been struggling to retain new members. We have long had a strong following, but I am concerned about the lack of “new faces” we see at meetings. We have made real strides this year with the student population and I am sure this will only strengthen our numbers in the years to come. What about the young engineers, technologists and contractors entering our chosen profession, why are these people not getting active?

Once again this year we will be hosting our popular **Career Fair** on March 16, 2010. I would like to personally thank Patrick Albert for all his hard work to put this together for another year. Great work Pat. I know I will be there and not just for ASHRAE - I will be looking for some resumes too (shameless plug I know)! We also had the annual **Curling Bonspiel** on March 5, 2010. Thank you Chris Healey for planning the tournament again this year, you do such a great job; you make it look easy (we all know it isn't).

This month we have the pleasure of welcoming Dr. **Victor Goldschmidt**, Professor Emeritus, Purdue University School of Mechanical Engineering and an ASHRAE distinguished lecturer. If you are unfamiliar with the distinguished lecturer program, ASHRAE publishes a list of individuals who are thoroughly reviewed and voted as exceptional speakers and knowledgeable in their field. Dr. Goldschmidt is no exception and I am sure the March meeting will not be one to miss. We will also be hosting a very interesting technical session prior to the meeting starting at 4:30pm till 5:30pm. It is free of charge to all ASHRAE OVC members and students.

The evening program will focus back on the basics of ASHRAE and why most of us got involved. This is a fitting topic since I am sure there will be many “new faces” in the crowd from the career fair. Please reach out and share a little of your experience and knowledge. After all, technology transfer doesn't always occur in textbooks, papers and emails. Sometimes we need to get back to the basics and remember that some things are best done the old fashion way. Just start with a “hello” and the rest will take care of itself.

I hope to see you all at our upcoming meeting on Tuesday March 16, 2010.

Sincerely,
 Jason Alexander, P.Eng.
 2009-2010 OVC President



Secretary



What you missed

By Donald Weeks
2009-2010 OVC Secretary

The night's theme was Research/TEGA.

This month's table top was Walmar.

President Jason Alexander opened the meeting and welcomed members, guests and students. President Alexander introduced the Board of Governors and the Executive Board.

President Alexander introduced Patrick St. Onge who discussed ASHRAE Research and the goal of \$20,000.00 for the Chapter. Also, Patrick mentioned the various student members that were attending the meeting. He also asked for Chapter members to support students for the dinner.

Georges Maamari (Chair) noted the availability of applications for the Chapter TEGA awards and the deadlines for the applications. Georges also noted that the program evaluation forms were on the dinner tables, and he asked that the members fill out the forms at each meeting.

The evening's program was entitled 'Seismic Control – Requirements into Mechanical Systems'. Mr. Ryan Belluz is the Director of Operations Eastern Canada for Tecoustics, Ltd. He discussed MJ piping connections, large equipment support, and roof curbs, all in relation to seismic control. His talk was divided into four sections:

Topic 1 – General Seismic Overview

Topic 2 – Riser Piping; Riser systems that satisfy seismic, vibration, and thermal expansion requirements

Topic 3 – Large Equipment support; Designing large equipment supports that meet seismic requirements while remaining adaptable to post-bid equipment selection

Topic 4 -- Q & A Forum

Mr. Belluz also discussed solutions, especially with regards to expansion joints and connections.

Jason Alexander thanked him for his presentation and presented him with a gift.

President Alexander asked that the member survey be completed. Jason also asked members to come to the next meeting, where we will have the honor to receive a Distinguished Lecturer, Mr. Victor Goldschmidt, in March, 2010, on the topic, 'ASHRAE's Core Values, and Their Implication'.

Donald Weeks



Career Fair 2010

By Matthew Edmonds
2009-2010 OVC Student Activity Chair

The time is upon us! This month we hold our annual ASHRAE OVC Career fair. As always we use this event to help expose employers to prospective student and recent graduate employees and vice versa.

This year's career fair is being held on Tuesday March 16, 2010 at the Travelodge located at 1376 Carling Avenue, directly preceding the OVC meeting, and is currently scheduled to run from 1:30PM to 4PM. As always student attendance is free of charge, and for exhibiting companies your fees will cover a 12'x8' space for a booth, along with 120VAC power, tables and skirts, and will also cover one free dinner at that evening's reception.

Corporate response started off with a bang with numerous returning firms signing up for booths almost immediately. Following that, given some of the economic circumstances this year has placed many of us in, we kept signing up companies but have not reached our full capacity. So if this event seems like the right opportunity for your company to get exposure to a pool of energetic and eager "to-be-employees", then please contact Patrick Albert at Patrick@breck-mar.com /613-728-0060.

As always, and especially given that we are approaching our second student night of the season we encourage you to help sponsor student meals at each of our monthly meetings. Sponsorships can be made at the registration table at each meeting.

Best Regards

Matthew Edmonds
2009-2010 ASHRAE Student Activity Chair

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Ray Rochefort
Area General Manager



History – Spotlight on George Carscallen

by Rod Potter
Chapter Historian, Gopher and Webmaster



George Carscallen was born on April 5th, 1935 in Tamworth, Ontario, a village northwest of Kingston. His family moved to Kingston in 1939 where he attended public and high school, and Queen`s University graduating in 1959 with a Bachelor of Applied Science degree.

While at Queens, George had met Mike Overbury, who was now working as a sales engineer with Dunham- Bush. Al Gray was the office and heating sales manager, Mike Overbury handled cooling sales, and George accepted an offer to work with Al doing takeoffs and costing the heating equipment for construction projects available through the Builders Exchange office as his introduction to sales. At that time, mechanical cooling was new whereas all buildings had heating and ventilating systems, heating being mostly hot water convection type but some still using the Dunham vacuum steam design giving George a broad introduction to heating and ventilating design.



Al Gray

Unfortunately by February 1960 the Ottawa office could not support three engineers and George was asked to relocate to the Toronto Plant Engineering Department of Dunham Bush. His role there was to receive orders, prepare shop drawings, and create detailed fabrication drawings. He was told that this would only be a temporary position until things improved and he could return to sales. This did not happen fast enough for George and during his time in Ottawa he had made contact with Gordon Goodkey of Adjeleian, Goodkey Weedmark. He arranged an interview there and accepted a position as a design engineer on September 1st 1960. The office was located in the old Commonwealth building on Metcalfe Street, and engineering drawings in those days were produced with pencil on paper. Occasionally a better standard was required using ink with Leroy stencils for lettering. In 1962, Adjeleian and Goodkey, Weedmark became separate firms but have continued to work very closely with each other.

Early design projects for George included new Change Rooms and Training facility for the Ottawa Football Club at Lansdowne Park, upgrade of steam distribution piping systems at the Civic Hospital, local schools and churches.

The mid 1960`s brought about the decision by Carleton University to relocate to its present site which led to the formation of an architectural and engineering consortium led by Balharrie, Helmer Associates, Adjeleian and Associates and Goodkey, Weedmark and Associates responsible for design of this undertaking.

At Goodkey, Weedmark, the primary personnel were Gordon Goodkey, Stirling Weedmark, George, Mark Clemann, Gerry Patterson and Bob Cornwell with all playing important roles in the design of the new buildings – Tory, Patterson Hall, Library, Steacie, Eating Centre/ Commons, Southam Hall, Loeb – George`s specific projects were the Central Heating Plant, site layout and size of the combined pedestrian and service tunnels including high pressure steam, condensate and compressed air piping distribution systems, Lanark and Renfrew residences. Although cooling equipment was not included in the initial designs, the designs were based upon its future addition - he remembers attending the residence design meetings where he was asked how much warmer the buildings might be if they faced east or west and if trees were planted for shade. He recommended north-south orientation to minimize exposure to the sun and concrete fins to provide shading over windows in lieu of trees, and it still works. Part of the rationale for a high pressure steam system was its compatibility to absorption type chillers which would provide a summer load for the steam plant and minimize the electrical requirements in the terminal buildings whenever cooling would be affordable. At one time, virtually all of the buildings received cooling from multiple mini-central absorption type chilled water plants. George`s work at Carleton University continued over the years to include Grenville Residence, Central Heating Plant expansion, evaluation and conversion of the tunnel piping systems and various buildings from the ground water system back to the central plant system and various building upgrades.

(cont...)

Other projects George was involved with were the central heating plant for Riverside Hospital, the central heating & cooling plant for the ADRI Complex, Barrhaven, the high pressure steam distribution from the Tri-Service Hospital central heating plant to the Postal Terminal and RCMP Headquarters, evaluation of the Confederation Heights high temperature water system and modifications to improve summer operating efficiency to mention a few.

One project that George remembers fondly was a 21-storey apartment building on Rochester Street, built by the Ontario Housing Corporation. Traditionally, OHC projects were design/build with loose requirements (number of units and cost) the result of which was buildings that performed very poorly. By an unusual happening, McLean and McPhadyn, Architects with Goodkey, Weedmark as mechanical and electrical Engineers were appointed to do a new apartment building, an arrangement with which OHC was not happy - resulting with the strong proviso that the cost per unit could not exceed that of their previous buildings. To meet that budget electric heating was the only option so George designed a system with in-slab electric heating that offset most of the heat loss supplemented with perimeter baseboards for individual room temperature control. The thermal storage capacity of the heavy concrete slabs allowed the in-slab heating to be cycled via an electrical load monitoring system to maintain the building electrical demand to a design limit and minimize demand charges. Also, a central rooftop makeup-exhaust air unit with heat recovery reduced the heating coil size from 150 kW to 30 kW. The happy outcome of this was the cost came within the budget and when taken over by the Property Management Department, told that it was their best building.

In 1971, during the ADRI project, Goodkey Weedmark was introduced to RON Engineering and their developer counterpart Arnon Corporation. This relationship flourished and the two firms worked together on many projects including apartment buildings, the Meriline Court complex at Merivale and Baseline Roads, and eventually many of the Nortel buildings where the standard for lab air conditioning was packaged DX Liebert systems with air-cooled condensers. At Meriline Court, as lab space grew, the number of air-cooled condensers also grew, taking so much space that adjacent car parking was being infringed upon. These DX systems were running year round and gobbling energy so, after many attempts, George convinced them to convert to a central chilled water plant coupled with plate heat exchanger and fluid coolers for winter free cooling - and suddenly there was space for the Buicks!

In 1983 Gordon Goodkey was diagnosed with a brain tumour and eventually died in early 1986 after a long battle. This paved the way for George to purchase the company and Goodkey, Weedmark (1985) & Associates was born.



Gord Goodkey

George's relationship with RON Engineering continued to flourish and a highlight of his career was his involvement in the planning of a new city hall complex for the City of Jerusalem. Olympia York and Ron Engineering were developing a four-building complex and George was invited to provide mechanical and electrical design concepts and space-planning for the project. He worked with Jack Diamond, a heritage building architect from Toronto to prepare the preliminary documents which outlined core details, shaft locations, energy concepts, and proposed the incorporation of an ice plant. However, there was a Tel Aviv based consultant responsible for the final design, who had already decided on a conventional central heating/cooling plant and could not be convinced that ice storage was the way to go. George remained involved with the project and eventually made three trips to Jerusalem with the final trip in 1991. During this trip he was able to see a front lawn where a Scud missile had landed (this was at the time of the first Gulf war) and he was impressed that the site was cleared up with new landscaping within days so the uninformed would not know.



Stirling Weedmark

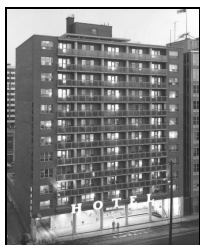
In 1988 Goodkey Weedmark was awarded the M&E design for the expansion of the Tilley Building which is occupied by CSE. The expansion was constructed in such a way that the entire structure is screened for radio transmissions - nothing gets in and nothing gets out. All penetrations of the screened walls for ducting had to incorporate wave-guide filters - this was all very interesting stuff at the time. The design incorporated DDC controls which were fairly new in those days and everything was automated. George remembers getting a call from Stirling Weedmark one day to report that the huge fluid coolers on the roof had completely iced-up over the Christmas /New Year holidays -the systems were in the commissioning stage, the controls had malfunctioned, no service personnel were around, and the frustrated commissionaire had simply turned off his computer when its printer ran out of paper because of the number of false alarms coming from the fire alarm system! *(I should perhaps note here that I was working for George in those days, and I was the guy who designed the control system - oops - ed.)*

(cont...)

More recent projects included working with Subash Vohra of NRC, on their Co-Gen plant at the Montreal Road Campus adding 200 tons of absorption chilling to pre-cool the turbine intake air and prevent the 20% loss in power output during the summer period. Another interesting project with NRC was their ice-storage plant for cooling the wind tunnel in Building M-02.

* * * * *

I have always thought of George Carscallen as being “Mr. ASHRAE” because of his seemingly endless support of the Society. He attended his first meeting with his pal Ian Paterson at the Beacon Arms Hotel in May 1959. ASHRAE Ottawa was a fairly small operation in those days and George has fond memories of playing “bullshit poker” with the likes of Jimmy Moore, Dick Chiarelli, Bob Legare, Gord Goodkey, and Ginger Colcough to name a few after the meetings. This involved playing poker using the unique serial numbers on dollar bills. Another is the time after an ASHRAE golf tournament at Cedarhill playing BS poker at the bar for drinks, perhaps too noisily for some likes when a certain Bob Irving of Irving Contracting dumped a full ice bucket over George’s head to quiet things down but the game continued with little notice. Other great ASHRAE pals were George McRae, Al Oakes, Don McKeen, Jack Bowie, Dalton McIntyre, John Dugan, Charlie Hobbs, Bob McKee, Doug Proctor, Norm Johnston (Toronto), Gordon Weld (Halifax) to name but a few and the most rewarding part for George is that they have been lasting friendships.



Beacon Arms Hotel



Ian Paterson



Dick Chiarelli



George McRae



Al Oakes



Don McKeen



Jack Bowie



Dalton McIntyre



John Dugan



Charlie Hobbs



Bob McKee

George went through the ASHRAE OVC chairs to eventually become President for the 1969-70 chapter year. He made many great contacts and attended many functions through these years and for example enjoyed inter-chapter curling bonspiels, the Montreal Chapter golf day in Lachute where Ottawa members and guests frequently outnumbered those from Montreal, and the Ottawa/Montreal ski weekends at the Chanticleer(?). Typical of the antics that took place in those days was at the Quebec Chapter bonspiel sharing a motel room with George McRae who had a box of new Cuban cigars. He decided that the humidity in the room was too low, and set them on top of the frame of the shower stall, turned the shower on hot and went visiting next door leaving the door to the outdoors wide open to probably -20C ambient with George Carscallen continuing to enjoy his sleep. George was eventually awakened by the noise of splashing water to see the room full of vapour and the entire floor covered with water; the shower floor mat had covered the drain - but to George McRae’s delight, the cigars were fine! While attending that bonspiel in Quebec City in 1978 George was approached by Bill Hole, ASHRAE Society President, and encouraged to get active at the Society level. George did so serving on the Meetings and Exposition Committee (twice), Members Council and Standards Committee over a period of 20 years and thoroughly enjoyed the networking that ensued.

(cont...)

George organized a Chapter Research Promotion fund raising evening consisting of cocktails, dinner and a “night at the races” but the difference being *films* of races, not at the track. All were given wine with dinner to stimulate participation, a brief preview of the horses before each race, followed by an auction to buy the horses and par mutual betting so even if you did not own a horse you could bet and share in the action - all under the stewardship of our own barker, Paul Baker in his floppy fedora. When all horses were sold and the betting closed, the horses were off. To those of us knowing Dalton McIntyre as poised, quiet and reserved, wife Edith was most exuberant organizing a consortium of owners at her table and using her past experiences playing the ponies in Montreal, Edith and ASHRAE Research were the big winners of the evening and Dalton was smiling. Although much of this may sound frivolous, the Ottawa valley Chapter members worked hard, played hard and enjoyed a close and friendly relationship with one another.

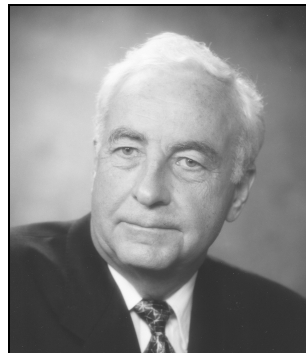
In 1984, the CRC was hosted by the Ottawa Valley Chapter at the Four Seasons Hotel with George as General Chairmen and ably assisted by Charlie Hobbs and Bob McKee. The highlight of the banquet evening was Holly LaRocque`s singing “steam heat” to Society guests, President Don Banfleth and Vice President Fred Kolhoss.

In 1988 the ASHRAE AGM was held in Ottawa, at the Chateau Laurier, and Gerry Patterson took the role of Chairman for this grand evening. George, Bob McKee and Charlie Hobbs were co-chairs.

George was the Meetings and Exposition Committee liaison to the Society Centennial Planning Committee with Presidential Member Lou Flagg its Chairman. Lou decided to invite all of the 100 year old ASHRAE members to the meeting (there were actually about 7 of them at that time) but by the time the meeting happened, there was only one left, Milton Garland. George remembers Milton attending the plenary session and jumping up on to the stage, Milton being ahead of him in line for bar tickets at the welcoming party and continuing on late into the evening. Milton was eventually honoured at the Whitehouse as America`s oldest engineer – a function he had to leave early because he had a course on refrigeration to teach at a local university! At a later summer meeting in Toronto George had reserved seating at the evening banquet and was pleasantly surprised to find Milton at the same table (with wife number 3 mind you).

One suggestion that George made for the Centennial banquet was that historical photos and videos be displayed on TV screens around the room. He did not know that this suggestion had been taken seriously until he arrived that evening to see Edith and Dalton, and Carole and himself dancing around the room.

In addition to the foregoing, George served as a fund raiser for the YM-YWCA, United Way and Ottawa Heart Institute, Director and President of the Rideau Curling and Laurentian Clubs; but his biggest love and devotion has been and is to his wife Carole (49 years), daughters Catherine, Kristen, son-in-law Rich and granddaughter Kate, and he believes that life has been kind to him.



George Carscallen

Roderic S. Potter
Ottawa
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Jim Mills P.Eng., LEED® AP
Principal, Buildings Engineering



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TEGA
By Georges Maamari
2009-2010 OVC Committee Chair

Dear ASHRAE members, please remember that the deadline for the TEGA submissions is April 1st, 2010. The awards will be presented to the deserving recipients at the May Chapter meeting.

As of now, the TEGA committee has received some interesting submissions. However, there are plenty of open spaces left in all the categories. As a reminder, the 7 categories for submission are:

- | | |
|-------------------------|---|
| Commercial buildings | Public Assembly |
| Institutional buildings | Residential |
| Health Care Facilities | Alternative and/or Renewable Energy Use |
| Industrial Facilities | |

Remember, the building must be in operation for at least the last 12 months in order for it to be eligible for entry.

Also remember that this year, we will be able to select two winners in each categories, therefore there are plenty of open spaces left in all the categories.

Please fill in the [short form application found here](#) and e-mail it to me before April 1st. If you need any assistance to fill in the form, please feel free to contact me.

Many thanks,
Georges Maamari
georges.maamari@wbbengineering.com



Student Activities: Second and Final Student Night

By Matthew Edmonds
2009-2010 OVC Committee Chair

The March OVC meeting marks the calendar as the second and final student night of the ASHRAE season. Given the turnout for the first student night, we are hoping to see as many, if not more students around this time. Hopefully we will even have enough food and seats for everyone this time!

In all seriousness, we have seen some serious interest and participation from our student chapters this year, and mirroring that is the response we have had from the industry to help the students where they can, whether it be through Student Meal Sponsorships or through volunteering to help with the design competition. All the exposure the students are receiving is priceless and will go a long way in preparing them for the real world. That being said, their year is far from over and they need our support now more than ever. So please keep the student meal sponsorships coming in, and when you see a student at a meeting help break the ice and go introduce yourself, it could be your next employee (or future boss) you are meeting!

As a final note, our second student night runs in conjunction with our Career Fair just preceding the OVC meeting. So let that be a reminder for all of you who may be opening your doors to student or recently graduated student employees this summer season. The students who will be at the Career Fair and meeting will be students who have specialized their training in the HVAC industry, and who have put the effort forth to come out and meet with all of us, lets show them the same courtesy.

Matthew Edmonds

More student related information from ASHRAE:

Check This Out:

ASHRAE Student Zone: Scholarships and Grants to Careers and Internships... <http://www.ashrae.org/students/>

ASHRAE Scholarship Program
<http://www.ashrae.org/students/page/1271>

16-40-40 – Don't know what it is? Every Student Should!

<http://www.ashrae.org/students/page/703>

Dates to remember:

ASHRAE Career Fair '09 – Tuesday, March 16th: We need promotion to Schools as well as industry support. Sign-up for your booth today!

Undergraduate Engineering Technology Scholarships

Application Deadline: May 1

Scholarships are awarded for the academic year beginning with the fall semester following the application deadline. Re-applications accepted from qualified former scholarship applicants and recipients

Applicants must have a cumulative Grade Point Average of at least a 3.0 on a scale where 4.0 is the highest and/or a class ranking of no less than the top 30% (evidenced by an official transcript of grades or statement from a school administrator) and meet all other basic criteria.

(cont...)

Engineering Technology Scholarship (3)

One-year \$3,000 scholarships available annually to full-time undergraduate Engineering Technology students enrolled in or accepted to a post-secondary educational institution for a bachelor degree or an associate degree and pursuing a course of study, which has traditionally been a preparatory curriculum for the HVAC&R profession, provided one of the following criteria is met:

- the institution hosts a recognized ASHRAE student branch (www.ashrae.org/students)
- the program is accredited by the Accreditation Board for Engineering and Technology (ABET) in the USA (www.abet.org) or an equivalent agency outside the USA that is a signatory of The Sydney Accord (<http://www.washingtonaccord.org/sydney/sydneylinkages.cfm>)
- the program is accredited by the Partnership for Air Conditioning, Heating, Refrigeration Accreditation (PAHRA) (<http://www.pahrahvacr.org/>)

For a list of schools with an ASHRAE student branch or accredited programs recognized by ASHRAE for the purpose of granting an Engineering Technology Scholarship, click on the links provided above or contact Lois Benedict at lbenedict@ashrae.org or 404-636-8400 (ext. 1120).

Applicants must submit the following with the application completed in English in one envelope and postmarked by the application deadline:

1. Official transcript of college grades (if college grades are not available by the application deadline, submit high school grades and verification of enrollment in or letter of acceptance to a post-secondary educational institution.)
2. A letter of recommendation from an instructor or faculty advisor, a current or past employer, and another character reference. In the case of institutions with an ASHRAE student branch, include a letter from the faculty advisor of that branch (may be one of the three letters of recommendation). Comments from the Student Activities Chair of an ASHRE chapter, if one is within reasonable distance of home or school following an interview with the applicant, are strongly encouraged and may be submitted electronically.

Treasurer



Financial Committee - on behalf of Student Activities Committee

By Stephen Lynch
2009-2010 OVC Treasurer

We apologize for this not being announced in the February Communiqué. We appreciate and desperately need sponsors for our Student Activities Committee programs. I hope that as members you have seen an increase in student involvement and have had a chance to speak to these students.

Special Donations - Donations towards Ottawa Regional Science Fair and ASHRAE Student Design Competition
Bill McKinnon

Student Meal Donations - In an effort to have more students attend we need sponsorship to cover the cost of meals of students as long as they have a valid ASHRAE membership.

January Meeting

- Phil Lemieux
- Marc Parent
- Mike Swayne
- Rod Potter

Currently we are breaking even for student meal support, Thank you for everyone's support. We are still short for the ASHRAE Student Design Competition and Ottawa Regional Science Fair. The Student Activities Committee is working on ways of providing individual and company recognition beyond the communiqué.

Should you have any questions, please do not hesitate to contact the Treasurer.



Determining energy Savings from Energy Efficiency Projects: Applying IPMVP & Guideline 14 to Performance Contracting & LEED – 3 hours, 3 PDH.

By Christine Kemp
2009-2010 OVC President Elect & CRC Alternate

DATE: Tuesday April 13, 2010

TIME: 9 AM to 12 PM (Sign-In/Coffee 8:30 AM)

LOCATION: Travelodge Ottawa Hotel & Conference Center
1376 Carling Avenue
Ottawa, Ontario
(613) 722-7600

OBJECTIVE:

This course provides an overview of measurement and verification (M&V) procedures for determining energy and cost savings. The class is intended for energy consultants, LEED professionals, and facility managers. Participants will learn principles of baseline definition and baseline adjustment, M&V plan development, IPMVP and Guideline 14 adherence, application to energy-efficiency upgrades and performance contracting projects, and application to LEED-NC and LEED-EB for EA-5.

SEMINAR LEADER: Mark Stetz, P.E., CMVP, CRM

Mark Stetz is a Professional Engineer, a Certified Measurement & Verification Professional (CMVP) and a Certified Carbon Reduction Manager (CRM) with over 15 years experience in the energy-efficiency and renewable energy field. Stetz Consulting is a member of the USGBC Education Provider Program and is an Energy Star service provider.

Current activities include energy audits for buildings seeking LEED EB certification, estimating energy and cost reductions, developing M&V plans and protocols, economic analysis and energy-efficiency program support, and evaluating emerging technologies.

Training topics include measurement and verification for LEED and performance contracting, energy auditing, and economic analysis. Mr. Stetz has presented courses for ASHRAE, the Efficiency Valuation Organization, SARI/E, US DOE FEMP, and USAID

AGENDA

- I. Introduction and Purpose of Course*
- II. Introduction to Performance Contracting*

This section will provide information on:

- Definitions of performance contracting and ESCOs
- Performance contracting deal types and financing
- Contract issues in performance contracting

The learning objective is to provide background on what performance contracting is and what the technical and financial risks are.

III. Introduction to LEED

This section will provide information on:

- The USGBC LEED Program
- LEED Minimum Program Requirements
- LEED New Construction and Existing Building EE Credits

USGBC's LEED program is another major driver for building energy efficiency and measurement & verification that has its own specific rules and requirements. The learning objective is to provide background on recent changes to the LEED program.

IV. Definitions

The learning objective is to understand M&V terminology and fundamentals.

V. M&V Protocols

In this section, we review the IPMVP, FEMP, and ASHRAE G-14 M&V Guidelines and how they are applied to private sector performance contracting, federal Super ESPC projects, and the LEED program. The learning objective is to formally define M&V and indicate the different perspectives associated with M&V and to understand the protocols used.

VI. M&V Planning and Adherence with Guidelines

This section walks very briefly through the steps associated with planning M&V for a project. The learning objective is knowing the elements of planning a project and having the attendees able to start designing their own M&V efforts. Compliance information is provided for the IPMVP and ASHRAE G-14.

VII. Applications to Performance Contracting

M&V is like insurance – it defines and allocates project risk to the appropriate parties. This section discusses the types of risks associated with performance contracting projects and how good M&V identifies and allocates these risk elements.

VIII. Applications to LEED

LEED NC and EBOM encourage performance verification for certified buildings, although the approach taken depends on whether the building is existing or new. LEED calls for following IPMVP principles; this section discusses what is necessary to put those principles into practice.

IX. Final Questions and Comments

Time for questions and issues raised during the class. The learning objective is to answer outstanding questions and provide a forum for general discussion.



Determining Energy Savings from Energy Efficiency Projects:
Applying IPMVP and G-14 to Performance Contracting and LEED Projects
REGISTRATION FORM

(SPACE IS LIMITED TO 30 PARTICIPANTS – FIRST COME FIRST SERVED)

FEES:

ASHRAE OTTAWA VALLEY CHAPTER MEMBERS ___ \$ 225.00
NON-MEMBERS ___ \$ 275.00

- **Deadline for sign-up and payment is April 6, 2010**

Fees include documentation and Continental Buffet Breakfast

Important Note: Register in advance as there will be NO on-site registration

PLEASE FAX or E-MAIL YOUR REGISTRATION FORM TO:

ATTENTION: CHRISTINE KEMP

FAX: (613) 225-2972 E-Mail: christine@walmart.net

Then forward your cheque to:

Walmart Ventilation Products, 24 Gurdwara Road,
Nepean, Ontario K2E 8B5

Attendee Information:

Name(s): _____

ASHRAE Membership # _____

Daytime Telephone: _____ E-mail: _____

Company Name and Mailing Address:

Please make cheque payable to- ASHRAE Ottawa Valley Chapter



Seminar on Variable Frequency Drives

By Patrick Albert
2009-2010 OVC Governor

DATE: Tuesday May 11, 2010
TIME: 9 AM to 4 PM (Sign-In/Coffee 8:30 AM)
LOCATION: Travelodge Ottawa Hotel & Conference Center
1376 Carling Avenue
Ottawa, Ontario
(613) 722-7600

Objective:

This seminar will provide you with an in-depth knowledge of the internal components and proper application of a Variable Frequency Drive (VFD) to achieve maximum energy savings. Participants will be able to identify ideal VFD application to minimize energy losses and improve overall comfort.

Seminar Leader:

Ken Fonstad graduated from the University of Wisconsin—Parkside with Bachelor of Science degrees in Physics and Mathematics and from the University of Wisconsin—Milwaukee with a Masters of Science degree in Environmental Engineering.

Ken taught Physics and Mathematics at Brookfield Central High School, Waukesha County Technical College, and Marquette University and has been a visiting lecturer at the Milwaukee School of Engineering. He has worked as the Marketing Manager for Shimpo Drives, a manufacturer of industrial adjustable speed drives, speed reducers, and related control equipment. Ken founded *Technical Assistance*, a company that provides technical support services, such as custom technical training programs, technical writing, electronic publishing, and custom computer programming. He is the Training Manager for Danfoss Drives in Milwaukee, Wisconsin, and has served as a member of the Danfoss Drives Global Training Team. In 2007 Ken served as the Chair of the Engineering Committee of the Variable Frequency Drives Product Section of the Air-Conditioning and Refrigeration Institute (ARI, now the AHRI).

Articles written by Ken have appeared in *Consulting/Specifying Engineer*, *Energy Engineering*, and *Power Transmission Design*. He also presented a paper dealing with power line harmonics at the *2004 World Energy Exposition Congress* and has made presentations on adjustable frequency drives and their application to HVAC systems to various local ASHRAE chapters and national meetings.

Agenda:

8:30am to 9:00am **Registration**

9:00am to 10:15am **Variable Frequency Drive Fundamentals**

- A. Basic AC Motor Operation
- B. Controlling a AC Motor's Speed
- C. Basic Variable Frequency Drive Design
- D. Controlling the Motor's Frequency and Voltage
- E. Extended Frequency Operation
- F. Basic Considerations when Installing a Variable Frequency Drive

10:15am to 10:30am **Break**

10:30am to 12pm **Using Variable Frequency Drives in Variable Torque HVAC Applications**

- A. Overview of Variable Torque HVAC Applications
- B. Why flow Control?
- C. Why Variable Frequency Drives?
- D. Controlling Secondary Pumps
- E. Controlling Fans
 - 1. Supply Fans
 - 2. Return Fans
 - 3. Exhaust Fans
 - 4. Cooling Tower Fans
 - 5. Condenser Fans
- F. Other Pumping Applications
 - 1. Condenser Water Pumps
 - 2. Primary Pumps
 - 3. Pressure Booster Pumps

12pm to 12:30pm **Lunch**

12:30pm to 2pm **What's the Difference Between AC Drives?**

- A. Power Circuit Considerations
- B. Power Control Considerations
- C. Application Interface Software

2pm to 2:15pm **Break**

2:15pm to 4pm **Applying Variable Frequency Drives in HVAC Systems: The Potential and the Pitfalls**

- A. Miss-Use of the Centrifugal Affinity "Laws"
- B. Removed Pressure Drop
- C. Lack of System Knowledge
- D. Poor Pressure Sensor Location

If you have any questions or concerns, feel free to contact:

Patrick Albert
ASHRAE OVC Governor
(T) 613-728-0060
(F) 613-725-2637
patrick@breck-mar.com



Variable Frequency Drives and Energy Savings
REGISTRATION FORM

(SPACE IS LIMITED TO 40 PARTICIPANTS – FIRST COME FIRST SERVED)

FEES:

ASHRAE OTTAWA VALLEY CHAPTER MEMBERS ___ \$ 325.00
NON-MEMBERS ___ \$ 375.00

- **Deadline for sign-up and payment is May 1st, 2010**

Fees include documentation, coffee, beverages and Lunch

Important Note: Register in advance as there will be NO on-site registration

PLEASE FAX or E-MAIL YOUR REGISTRATION FORM TO:

ATTENTION: PATRICK ALBERT

FAX: (613) 725-2637 E-Mail: patrick@breck-mar.com

Then forward your cheque to:

Breck-Mar Sales & Service
877 boyd Avenue
Ottawa, Ontario K2A 2E2

Attendee Information:

Name(s): _____

ASHRAE Membership # _____

Daytime Telephone: _____ E-mail: _____

Company Name and Mailing Address:

Please make cheque payable to- ASHRAE Ottawa Valley Chapter



COGENCanada CHP Association **4th Annual Conference, Mississauga, ON**

4th Annual COGENCanada Conference 1,2,3 June 2010, Mississauga, Ontario

There is no better time than now, with Canada and the US at a crossroads in energy generation, to invest in the future of the industry. And there is no better investment than COGENCanada's 4th Annual Conference June 1-3, 2010 in Mississauga, Ontario. It is the Canadian power industry's Conference with the best return on investment in human capital in 2010.

This is the most important Conference in the industry this year. It covers the technologies, business considerations and public policy issues which affect efficient power generation and usage. Cogeneration is evolving from a specialized application to becoming a significant component in the energy industry – the foundation of the next generation of economic prosperity, urban development and the renaissance of the manufacturing sector.

Delegates will gain:

- Enhanced networks of peers in the private and public sectors
- Insights from industry leaders and key government officials
- A competitive edge from service and product suppliers offerings
- Increased knowledge of cogeneration and the industry from expert speakers
- Strong relationships by visiting the sponsor-exhibitor Hospitality Suites

The Conference is the ideal venue for equipment and service vendors to exhibit their offerings and for leaders in the energy sector to demonstrate their foresight through sponsorships. Come join us, network with colleagues and build new business relations at the COGENCanada CHP Association 4th Annual Conference in Mississauga, Ontario Canada.

We offer key presentations from top authorities. The program includes:

- Gas turbines, combined cycles, IGCC
- Waste heat recovery cogen
- OTSG Power Plants
- Biomass Cogeneration
- Cogenerated Energy from Waste: European Experiences
- Eco-industrial business zones
- Hydrogen enriched natural gas and hydrogen enriched fuel from coal
- Carbon dioxide capture and storage
- Energy Storage
- Panel Discussion on Cogeneration RFPs
- Tour of Pearson Eco-business Zone Cogeneration Facilities

Sponsors and Exhibitors:

Product and service information is available from sponsors and exhibitors to the Conference. After the presentations Delegates can network and relax in Hospitality Suites.

In these times of transition, the best investment is one which provides a clearer view of the present and the future. Get that clearer view from Canada's premier heat and power event, COGENCanada's 4th Annual Conference. [Learn more and register today.](#)

A. P. Day, Conference Team Leader
COGENCanada CHP Association
cogenconference2010@cogencanada.org



News Update

By Georges Maamari,
2009-2010 OVC Governor

Technical News:

Members Sought for Committee

First Changes Proposed to New Green Standard: Daylighting Addressed

ATLANTA—Members are being sought and changes proposed for the new standard for the design of high-performance green buildings published in January.

ANSI/ASHRAE/USGBC/IES Standard 189.1, *Standard for the Design of High-Performance, Green Buildings Except Low-Rise Residential Buildings*, is the first code-intended commercial green building standard in the United States.

The standard provides a long-needed green building foundation for those who strive to design, build and operate green buildings. It covers key topic areas of site sustainability, water use efficiency, energy efficiency, indoor environmental quality and the building's impact on the atmosphere, materials and resources.

Under ASHRAE's continuous maintenance procedure, which allows requests for change to any part of the standard to be made at any time, changes have already been proposed.

"Given the high amount of interest in this standard, using continuous maintenance allows us to incorporate current technical information on a timely basis," Kent Peterson, chair of the committee said. "These changes are then put out for public review and comment, which results in an industry consensus standard."

Open for public comment are addenda *a* and *b*. Addendum *a* makes the daylighting definitions and criteria consistent with changes recently proposed to Standard 90.1, which sets requirements for energy efficient buildings. Addendum *b* reduces the space limitation for daylighting requirements. Rather than requiring daylighting in space larger than 1,000 square feet, the proposal would require it in spaces larger than 250 square feet.

Members also are being sought for the committee developing the standard with slots opening July 1. The deadline to apply is March 31. For more information on membership, contact standardssection@ashrae.org

Sustainability News:

ATLANTA—With publication of the green building standard, an updated online seminar reviewing its requirements is now available from ASHRAE.

ANSI/ASHRAE/USGBC/IES Standard 189.1, *Standard for the Design of High-Performance, Green Buildings Except Low-Rise Residential Buildings*, is the first code-intended commercial green building standard in the United States. It provides a long-needed green building foundation for those who strive to design, build and operate green buildings. The standard covers key topic areas of site sustainability, water use efficiency, energy efficiency, indoor environmental quality and the building's impact on the atmosphere, materials and resources, and also includes construction practices as well as plans for operation of the building after occupancy.

A course from ASHRAE on the requirements of the standard, *Understanding Standard 189.1P for High-Performance, Green Buildings*, takes place March 15 and is taught by Tom Lawrence, a member of the committee that developed the standard. The course is one of 14 being offered this spring.

(cont...)

“The course has evolved as the standard has taken shape, and I anticipate that the course will continue to evolve as changes and addenda are approved, resulting from changes in concepts, technologies and design for green buildings” Lawrence said. “Standard 189.1 has the potential to be a 'game changer' in the industry and thus anyone who is working with green design would benefit from learning more about the standard. One way to do that is by taking this course.”

The 14 online, instructor-led seminars that will run from March until May and are available to those interested in expanding their knowledge of the HVAC industry and keeping up to date with the latest technology and their applications.

A full list of seminars and registration information can be found at www.ashrae.org/onlinecourses. Other courses are:

- *Humidity Controls: Basic Principles Loads and Equipment*
- *Humidity Controls: Application, Control Levels & Mold Avoidance*
- *Introduction to Green Buildings and Sustainable Construction*
- *The Commissioning Process and Guideline 0*
- *Introduction to Thermal Energy Storage Systems for Air Conditioning*
- *Complying with Standard 90.1-2007 HVAC/Mechanical*
- *Energy Management in New and Existing Buildings: a Sustainable Activity*
- *Complying with Standard 90.1-2007 Envelope/Lighting*
- *Using Standard 90.1-2007 to Meet LEED Requirements*
- *Introduction to Cleanroom Design*
- *District Cooling and Heating Systems: Central Plants*
- *Complying with Requirements of ASHRAE Standard 62.1-2007*
- *Understanding and Designing Dedicated Outside Air Systems*

The three-hour-long courses are taught in real-time, from 1 p.m. to 4 p.m. EDT, and feature interactive audio. Three professional development hours or American Institute of Architects learning units or 0.3 continuing education units are available for each course.

ASHRAE, founded in 1894, is an international organization of some 50,000 persons. ASHRAE fulfills its mission of advancing heating, ventilation, air conditioning and refrigeration to serve humanity and promote a sustainable world through research, standards writing, publishing and continuing education.

Committee
Chair



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by Rod Lancefield

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