



# AMERICAN SOCIETY OF HEATING, REFRIGERATION AND AIR CONDITIONING ENGINEERS INC.

LONDON CANADA CHAPTER #116

<http://LondonCanada.AshraeChapters.org>

Mon Oct 22/2007

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TOPIC:

## COOLING TOWER DESIGN

## APPLICATION AND PROBLEMS

# MR GARY SWEENEY

## CTM INC

(Cooling Tower Maintenance)

## Meeting - Mon Oct 22/2007

THE LAMPLIGHTER INN, 591 Wellington Rd., London

### **MEMBERSHIP NIGHT**

London Chapter Members = \$25.00  
Students = \$10.00    Others = \$35.00

### **MEMBERSHIP NIGHT**

CASH BAR                      ALL YOU CAN EAT BUFFET  
5:15-Social    6:00-Dinner    7:15-Program





## President's Message

I hope those of you who made it out to our September meeting enjoyed Mr Fred Campagna of AERCO International presentation on boiler plant efficiencies, ASHRAE SPC 155A and stratified hot water storage tank design. Fred provided a wealth of information on how to better understand boiler efficiency ratings. The remainder of this year's program & monthly meetings is very close to being finalized. You can check out the speakers, topics and dates on our website, at <http://LondonCanada.AshraeChapters.org>.

Last month's meeting was our first Student Promotion Night this year as well. I had the privilege of awarding the ASHRAE Memorial Scholarship to Mr. Brian Coulter, a 4th year engineering student at the University of Western Ontario, and the first recipient of an ASHRAE Society Scholarship in our chapter history. Congratulations, Brian! I would also like to thank the five other students who made it out to their 1st ASHRAE meeting. We continue to extend an invitation to all students to attend & hope to see more new young faces at our future meetings. Lastly, I would also like to thank the five companies that sponsored the students to attend the September meeting. Your support and assistance is truly appreciated.

This month's meeting is Membership Promotion night. Our goal for the year is to raise local membership with new members. If you know of anyone who would benefit from being an ASHRAE member, please let myself (sedmunds@uniongas.com) or our Membership Chair, Karl Gilroy (kgilroy@prive-hvac.com) know. Better yet, if you know someone who would enjoy attending one of our monthly meetings to hear a speaker, such as Mr. Gary Sweeney from CTM, who will be speaking on Cooling Tower Design at this month's meeting, please invite them to come along with you. If nothing else, I certainly hope you can make it out to the meeting on October 22nd.

Scott Edmunds  
ASHRAE London President

## Membership Night

If you know someone who would benefit from our meetings invite them out. Being a chapter member provides a reason to get out once a month and meet with your peers. By attending the monthly Chapter meeting you have access to the expertise of many in our industry. Of course, meetings are open to all so if you don't know if you want to join the chapter, come on out for a month or two and see what it's all about

Karl Gilroy  
ASHRAE London Member Chair

## HVAC Heritage Centre Canada

Preserving and promoting the HVACR Industry's - and your heritage and legacy - is what the HVACR Heritage Centre Canada is all about. It is the only group in North America striving to not only preserve the significant technological achievements of the early 20th Century - but also the pioneers, the innovators, the leaders who made all that you benefit from today.

Check out our website at [www.hhc-canada.net](http://www.hhc-canada.net) and view the major educational presentation: 'Chilling Out' the evolution of refrigeration and its impact on lifestyles, culture, society and the economy during the 20th Century, just one example of what this new group is striving to achieve.

Pete Edmiston  
Branch Manager



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## **Speakers Bio**

Gary Sweeney is the Director of Business Development for CTM Inc (Cooling Tower Maintenance) which deals with cooling towers, mobile hvac sales and rentals and ultra sonic humidification.

He spent 28 years with the Trane Company working in office administration, the parts department, achieved third year standing as a refrigeration apprentice, dispatcher and job coordinator, service salesman, service sales manager, Vice President and General Manager Service and finally, General Sales Manager for all equipment, temperature controls and aftermarket sales.

After leaving the Trane Company in 1999, Gary worked as an independent consultant to Enwave District Energy and the ECE Group before joining CTM Inc. Gary has a Honours BA from the University of Western Ontario. He is also a member of ASHRAE, BOMA, the Association of Condominium Managers of Ontario and Canadian Hospital Engineers Society.

## **Sept Meeting Summary**

The startup fall meeting for ASHRAE London Canada was on September 24th, and our speaker was Fred Campagna of AERCO International from Northvale, New Jersey. He spoke on the topic of "How boiler plant efficiencies will be estimated on a seasonal basis with reference to the upcoming SPC 155A ASHARE standard". He also spoke about condensing boiler technology development, and the process of selecting accumulator and stratified storage tank hot water system components (i.e. tank, pump, heater, pipe sizes) for laundry or process applications.

We also presented the ASHRAE Memorial Scholarship Award to University of Western Ontario Student Brian Coulter.



### **ASHRAE Memorial Scholarship Award**

ASHRAE London Canada 2007-2008 President Scott Edmunds (on left) presenting to 4th Year University of Western Ontario Student Brian Coulter (on right)

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## **UPCOMING Meetings & Events**

### **Mon Nov 26/2007**

Green Globes - Environmental Assessments for Building  
Mr Daryl Boyce - Carleton University, Ottawa

### **Mon March 31/2008**

Global Warming - Differing Perspectives  
Mr Victor Goldschmidt - Northport MI  
*ASHRAE DISTINGUISHED LECTURER*

### **Wed April 16, 2008**

Chapter Technology Transfer Committee Satellite Broadcast/Webcast

The broadcast will focus on "Integrated Building Design."

Watch for additional information regarding the Broadcast/Webcast via ASHRAE Insights and [www.ashrae.org](http://www.ashrae.org).

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### **ASHRAE Notes HVAC&R Industry's Role in Montreal Protocol Successes**

ATLANTA - The creation of the Montreal Protocol, the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) celebrates the efforts of the heating, ventilating, air conditioning and refrigeration (HVAC&R) industries that have played a role in reducing ozone depletion.

The Montreal Protocol on Substances that Deplete the Ozone Layer is an international treaty designed to protect the ozone layer by phasing out the production of a number of substances believed to be responsible for ozone depletion.

"ASHRAE has played a substantial role in stopping further ozone depletion by helping the industry to transition away from ozone-depleting refrigerants," Kent Peterson, ASHRAE president, said. "The Montreal Protocol has shown that when we do what is right for mankind, our initial burden can turn to benefit. Not only has the Montreal Protocol improved the ozone layer, but it also initiated vast technological improvements in air conditioning equipment."

ASHRAE has continuously developed ANSI/ASHRAE Standard 15-2004, Safety Standard for Refrigeration Systems, and ANSI/ASHRAE Standard 34-2007, Designation and Safety Classification of Refrigerants as new refrigerants that are better for the ozone have been developed. In particular, ASHRAE has traced the development of HCFCs to replace CFCs, and then HFCs to replace HCFCs as technology improved. Now, there is a movement to use "natural" refrigerants such as carbon dioxide, ammonia, and hydrocarbons such as propane and butane.

ASHRAE-funded research projects have also contributed to the successes of the Montreal Protocol. Research has included projects concerning ozone destruction, properties of refrigerants, and evaluation of CFC-alternative refrigerants.

Since the Montreal Protocol, ASHRAE has written and updated its Position Document on Ozone-Depleting Substances, and the Society is currently writing a position document on natural refrigerants.

Since the energy crisis of the 1970s in particular, ASHRAE has been a leader in energy efficiency. Work has included collaborations with the Clinton Climate Initiative, publications such as the Advanced Energy Design Guide series and the ASHRAE GreenGuide, and making ASHRAE's flagship energy standard that is adopted into building codes, ANSI/ASHRAE/IESNA Standard 90.1, Energy Standard for Buildings Except Low-Rise Residential Buildings, increasingly more energy efficient.

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### **Occupant Reactions to IEQ in Offices Presented at ASHRAE Conference**

ATLANTA – Glare, noise level and cold drafts during winter months were top concerns of building occupants surveyed in an Australian study regarding indoor environmental quality (IEQ) in office buildings.

Results of the survey will be shared at ASHRAE's IAQ 2007: Healthy and Sustainable Buildings conference, Baltimore Oct. 14-17. For more information, visit [www.iaq2007.org](http://www.iaq2007.org).

Occupants of two new buildings in Melbourne were asked about their satisfaction with design features and IEQ including temperature, airflow, air contaminants, sound pressure level, view, lighting and workspace configuration.

Researchers at the University of Melbourne found that the occupants' complaints dealt with areas related to building operation processes, lack of personal control and noise level.

"The study confirms that it is useful for understanding how design and environmental quality design features impact occupants," Maxwell Ashibuogu Chiazor, a doctoral student at the University of Melbourne, said. "The study shows that well-being and physiological discomfort are the two factors that account for occupants' reactions to design and environmental quality. This information is useful for decisions about workplace configuration and building energy efficient design features."

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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.



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**ASHRAE Seeks to Reach New Heights in New York City**

ATLANTA – ASHRAE will reach new heights in sustainability, professional development and HVAC&R technology at its 2008 Winter Meeting.

Centered on the theme Reaching New Heights, a nod to the skyscraper skyline of New York City, the meeting takes place Jan. 19-23 at the New York Hilton. Held in conjunction with the meeting is the ASHRAE co-sponsored AHR Expo, Jan. 22-24, Javits Convention Center.

For complete meeting information and to register, visit [www.ashrae.org/newyork](http://www.ashrae.org/newyork).

Meeting highlights include the technical program, with its theme of Reaching New Heights in Net-Zero Energy Design, featuring more than 130 sessions with presentation of 59 papers.

Sessions of special interest in the technical program include a roundtable featuring two of New York's best-known owner/developer firms along with the engineering designers who bring their projects to reality. The session takes place at 11 a.m. Jan. 22, New York Hilton.

A look at New York City's Sustainability Plan, plaNYC 2030, is presented at 9:45 a.m. Jan. 20, New York Hilton. One goal of the plan is to reduce greenhouse gas emissions by more than 30 percent by 2030. Learn about the city's efforts and ASHRAE's role in meeting these goals.

ASHRAE's free public session focuses on HVAC System Design for Security and Sustainability. It is held at 3 p.m. Jan. 22 at Javits Convention Center.

Steve Rizzo, author of *Becoming a Humor Being*, is keynote speaker at the plenary session held at 3:15 p.m. Jan. 19, New York Hilton. He shows people how to choose a healthy attitude both professionally and personally, learning how to succeed and enjoy their lives in the midst of challenging and changing times.

"Concerns about climate change and the need to reduce energy consumption has created numerous challenges, or make that wonderful opportunities, for the built environment engineering community," Kent Peterson, ASHRAE president, said. "Rising to the challenge will require equal parts of perseverance and innovation. Steve Rizzo illustrates how to embrace change as ASHRAE turns its technology engine against the daunting challenge of creating market viable net-zero energy buildings."

Sustainability is highlighted in the technical tours of facilities recognized around the world for their leadership in sustainable design. Buildings on the tour include Four Times Square, One Bryant Park, the Time and Life Building chiller plant, the Helena Apartment building, 7 World Trade Center and Time Warner Center.

The ASHRAE Learning Institute offers seven Professional Development Seminars and 14 short courses at the New York Hilton and Javits Convention Center. New sessions include Compliance with ANSI/ASHRAE/IESNA Standard 90.1-2007 and Energy Management in Existing Buildings.

Sustainability also is highlighted at the ASHRAE Headquarters Hotel, the New York Hilton. Sustainability measures at the hotel include 90 percent fluorescent lighting; environmentally friendly refrigerants used in the chillers; preheating of hot water with steam condensate; and occupancy sensors installed in the meeting rooms. The hotel recently installed a 200KW fuel cell to generate electricity in a clean, environmental friendly way.

In addition, ASHRAE is debuting a program that allows attendees to connect online to carpool or share hotel rooms. Through ShareSpace, attendees can find others in their neighborhood who are attending the meeting, making it easier to find someone to share a cab to the airport and hotel or catch up with someone upon arrival in New York to share ground transportation. Sharing rides or rooms cuts down on energy and vehicle usage, as well as provides networking opportunities. To learn more, visit [www.ashrae.org/newyork](http://www.ashrae.org/newyork) or [www.spaceshare.com/ashrae](http://www.spaceshare.com/ashrae).

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**ASHRAE Provides Guidance on Achieving Good IAQ**

ATLANTA – Providing design guidance on how to achieve good indoor air quality is the aim of a proposed guideline from ASHRAE now open for public comment.

Guideline 24P, Ventilation and Indoor Air Quality in Low-Rise Residential Buildings, is the companion guideline to ASHRAE Standard 62.2, Ventilation and Acceptable Indoor Air Quality in Low-Rise Residential Buildings. The guideline currently is open for public comment until Oct. 29, 2007.

The proposed guideline would provide information on envelope and system design, material selection, commissioning and installation, and operation and maintenance.

The guideline goes beyond the requirements contained in Standard 62.2 by providing explanatory and educational material that would be inappropriate in the code-intended standard.

Topics addressed in the guideline but not covered in the standard include carbon monoxide alarms, air distribution, better air filtration and unvented combustion appliances.

"While both Standard 62.2 and Guideline 24P seek to provide acceptable indoor air quality, the guideline goes beyond by providing additional information for achieving good indoor air quality," Steve Emmerich, chair of the committee writing the guideline, said. "The guideline also provides information on topics such as verification of ventilation equipment performance and operations and maintenance, which, though important, are not easily addressed in a code-intended standard."

A draft of proposed Guideline 24P is available during the public review period. To read the guideline or to comment, visit [www.ashrae.org/publicreviews](http://www.ashrae.org/publicreviews).