



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

LONDON CANADA CHAPTER #116

<http://LondonCanada.AshraeChapters.org>

Mon Jan 19/2009

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TOPIC:

**FIRE, LIFE SAFETY,
and BUILDING SCIENCE**

**MR. LESLIE SALTEL - Project Manager and
the Training Coordinator
and
MR. PHILIP BREARTON - Operations
Manager for the Building Science Group**

Pinchin Environmental
Mississauga, Ontario

Meeting - Mon Jan 19/2009

MEMBERSHIP NIGHT

London Chapter Members = \$30.00
Meal Plan Rate = \$150.00
Students = \$10.00 Others = \$40.00

THE LAMPLIGHTER INN, 591 Wellington Rd., London
CASH BAR ALL YOU CAN EAT BUFFET
5:15-Social 6:00-Dinner 7:15-Program





President's Message

I would like to start out by saying that we hope that all had a good holiday, and wish the best to all for a successful and positive year in 2009.

Yes, 2009 Has arrived.... And so has the cold winter weather. With predicted temperatures of -22 Deg. C. this week, we will get a taste of some "Below Design Conditions" that we do not like to hear about. Hopefully, it will not hang around too long.

This month at ASHRAE we will be hearing from two presenters: Leslie Saltel - Project Manager- Fire & Life Safety, and Phil Breardon – Manager of Building Sciences; both with Pinchin Environmental on the topic of "Fire, Life Safety, and Building Science".

Getting our membership meeting attendance numbers increased has been an ongoing challenge, and we are looking to the members for help and to suggest ways to get more people out to the meetings. "Interesting topics" seems to be the most common theme... we would like to hear from you as to what topics would be of interest. If you have a suggestion as to a speaker or topic, please contact us, or speak to us at the meeting.

We are looking to the local membership for individuals/companies to sponsor the college and university students that attend our meetings. This sponsorship helps to defray the costs of the meeting and meal, and also ASHRAE Student Membership that our local chapter processes to Society on the student's behalf. If you are interested or willing, please speak to one of the local London Chapter chairs at the meeting, or feel free to contact us by phone.

The ASHRAE Winter Meeting is at the end of this month in Chicago – from January 26th to the 28th. This event has always been well attended, and most people come away from the McCormick Place Exhibits with something new and interesting, as there are over 1,800 exhibitors from 35 countries. There are also many short courses, Technical Seminars, and free educational sessions and presentations daily. If anyone would like a Free Show Registration Pass, I still have a few that I will be happy to provide at the January meeting on the 19th.

I look forward to seeing you all out at the meeting...

Eric Shaw
ASHRAE London Canada Chapter President

Jan 19/2009 Meeting
Main Presentation

FIRE, LIFE SAFETY, and BUILDING SCIENCE

- Case Study - MGM Grand Hotel Fire
What is Fire - Know the enemy
Defensive Mode - Preventing Fire
Building Design
Offensive Strategies - Fighting Fire
What are the Rules of Engagement?
Residential Applications
What the Future holds

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Upcoming Meetings & Events

Mon Feb 23/2009 *Student Night*
 Controls
 Technology Shifts and ASHRAE Standards
 Joseph Klotz
 Product Sales Manager for Canada
 Johnson Controls

Mon Mar 30/2009 *Tour Night*
 to be determined

Wed Apr 22/2009 *IAQ Satellite Broadcast/Webcast*
 Clean, Lean and Green, IAQ for Sustainable Buildings

Mon Apr 27/2009 *Membership Night*
 CIPH and the Future of Hydronics In Canada
 John Goshulak P.Eng.
 Vice President, Sales and Marketing
 Weil-McLain Canada

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Sustainable Urban Design the Focus of ASHRAE Winter Conference '09 in Chicago

ATLANTA – At the 2009 ASHRAE Winter Conference in Chicago, you can be greeted at the Tech program not once but twice, courtesy of this year's extended series of sessions at McCormick Place on Wed., Jan. 28. Although the conference's technical program begins Jan. 25 at the Palmer House Hilton, the "Wednesday Welcome" event at the AHR Expo location offers ASHRAE members a chance to attend a kick-off morning reception and receive critical technical information at the educational sessions, with access to the show floor to see the latest in HVAC&R offerings.

ASHRAE's free public session also focuses on Sustainability in the Urban Development, sharing how the industry is building on its efforts to increase energy efficiency and indoor environmental quality of buildings by furthering the sustainability of entire communities. It is held at 3 p.m. Jan. 26 at McCormick Place.

The ASHRAE Winter Conference runs Jan. 24-28, 2009, and the AHR Expo takes place Jan. 26-28. For more information on the ASHRAE Conference, please visit

www.ashrae.org/chicago





Speakers Bio

Mr. Leslie Saltel is currently a Project Manager and the Training Coordinator for the Hazardous Materials Group at Pinchin Environmental. Leslie began his career in the Canadian Armed Forces and was a Paramedic with the Ontario Ministry of Health. He also attended O.S.H.A. HAZWOPER training (C.F.R. 1910.120) and Incident Commander Training in the U.S. in 1997. He has continued to develop training programs, specializing in Emergency Response including realistic training scenarios, often involving community tiered response and municipal Fire Departments in cooperation with industry to enhance disaster planning and emergency response. Leslie also has extensive experience with Health & Safety program development and adult education both in government and private industry.

Mr. Philip Brearton is Operations Manager for the Building Science Group at Pinchin Environmental. The building science group provides investigation and design services for commercial, institutional and industrial clients. Philip is a Professional Engineer with a Mechanical Engineering Degree from the University of Waterloo with a focus on material science. Philip began his career as a process engineer in the auto industry, managed construction and start-ups for two successive plastic film processing plants then ran his own roof material converting operation. Philip has personally assessed several hundred buildings for municipalities, school boards as well as multi-national companies. He has similarly overseen the design and implementation of hundreds of building renewal projects from below-grade, to the roof and everywhere in between. These projects have leant Philip a sensitivity to fire and building code implications as they relate to changes-in- use, repairs or renovations to existing buildings.

ASHRAE Partners with Industry Leaders in Building Sustainable Headquarters

ASHRAE's newly renovated Headquarters effectively serves as a laboratory without walls to extend the Society's knowledge and information worldwide.

"Our Living Laboratory provides value to ASHRAE members and the industry by allowing for evaluation of the ongoing energy and operational performance of the building at a level that is unprecedented in current commercial buildings," Bill Harrison, ASHRAE president, said. "The lab allows ASHRAE to contribute significantly to reducing energy use in buildings via future development of research and educational materials."

Completed in July, the \$7.65 million renovation includes a new learning and meeting center. Sustainable measures include projected reduction in annual energy usage of more than 31.5 percent through use of a dedicated outdoor air supply with energy recovery and humidity control, ground-source heat pumps and variable refrigerant flow systems with heat recovery; 52.3 percent reduction in water consumption by using low-flow or no-flow fixtures throughout the building; and increase of outside air delivered to each space by 30 percent beyond minimum rates specified in ASHRAE's Standard 62.1. More information can be found at www.ashrae.org/building.

The renewal was funded through donations of more than \$1.65 million in equipment, services and furnishings from more than 20 companies and individuals and the ASHRAE Foundation.

"The generous donations of the companies help ensure ASHRAE's headquarters is a showcase of sustainability for its members and the HVAC&R industry as a whole," Harrison said. "With its sustainability and productivity focus, this project showcases their commitment to environmental leadership and healthy built and natural environments. ASHRAE is grateful for not only their donations, but their dedication to the technologies we are embracing as part of the renewal."

Complete descriptions of donations can be found at www.ashrae.org/building. Major contributors to the Headquarters project include the ASHRAE Foundation, Carrier Corp., Automated Logic Corp. /Automated Logic Georgia, ClimateMaster Inc., Daikin Industries Ltd., Southern Company/Georgia Power Company, and Trane.

The ASHRAE Foundation provided funding for creation of the ASHRAE Foundation Learning Center, a new addition to the Headquarters that reflects the Society's commitment to education.

"The rapidly expanding technology on which our industry is based requires that individuals and industry alike are proactive in continuing their education," Richard Hayter, chair of the ASHRAE Foundation, said. "The Learning Center will significantly expand ASHRAE's ability to serve its members and the HVAC&R industry."

Automated Logic Corp. donated a networked building automation system hardware and software, which provides a user interface for the Living Lab, allowing researchers around the world to monitor performance and extract data for research purposes.



"We are very appreciative of the work ASHRAE does for our industry, conducting research and establishing standards that makes our job easier," said Steve Tom, director of technical information, Automated Logic Georgia. "We were delighted by this opportunity to give something back to ASHRAE. We also feel that the Web accessibility and data collection capacity of WebCTRL made it an ideal system to support the Living Lab."

Carrier Corp. donated funding for naming of the Willis H. Carrier Library on the second level of the Headquarters.

"It is with great honor that the ASHRAE Engineering Library will be named after Willis H. Carrier," said Mary Milmo, director, marketing communications, Carrier Building Systems and Services. "Carrier invented the first system for 'manufactured weather' in 1902 and sparked an industry that revolutionized the way in which we live, work and play. From that defining moment – and through to the present day – Carrier has built on a legacy of innovation. For more than a century, Carrier's research, expertise and forethought have resulted in market-leading innovations and 'firsts' that have shaped and defined the heating, air conditioning and refrigeration industry."

ClimateMaster provided a geothermal heat system that utilizes on-site renewable energy to provide high-efficiency heating and cooling for the 14 individual zones on the second level of the building.

"With buildings accounting for nearly 40 percent of all U.S. energy consumption, there is no doubt that ASHRAE members will play a crucial role in reshaping our energy future," Daniel Ellis, president of ClimateMaster Inc., said. "We are pleased that we were able to assist ASHRAE in demonstrating its leadership by making its Headquarters a model of energy efficiency and environmental stewardship."

Daikin's donation of a variable refrigerant volume s (VRV®) system serves the first and the Learning Center. The non-ozone-depleting potential refrigerant, individual zone control capabilities and heat recovery technologies helped ASHRAE reach its goal of building a sustainable headquarters. Additionally, Daikin also contributed a vegetative roof garden above the new ASHRAE Foundation Learning Center, which will be known as the Daikin Sustainability Garden.

"Daikin industries, a member of the Global 100 Most Sustainable Corporations, is committed to providing energy-efficient and sustainable building solutions by ensuring environmentally conscious practices in all business, product development, and manufacturing activities," said Kosei Uematsu, senior executive officer, Daikin Industries Ltd., and president, Daikin U.S. Corp. "Daikin Industries is pleased to be a partner in the ASHRAE Headquarters Renewal Project helping to preserve resources for current and future generations."

Georgia Power/Southern Co. provided 170-watt photovoltaic modules, which make up a solar electricity system and that produces electricity during daylight hours and back feeds energy into an existing grid, and an electric water heater.

"Georgia Power is committed to being a good citizen by supporting of our employees' involvement in ASHRAE's mission of advancing the arts and sciences of HVAC&R and by directly supporting projects that protect our environment's resources," said E. Lamont Houston, senior vice president, Customer Service and Sales, Georgia Power. "ASHRAE's renovated Headquarters will serve as a Living Lab, allowing Georgia Power to use this facility with customers as a model of new technologies and give us data to share with customers on the implications and performance of these technologies on their sites."

Trane donated key elements of the Headquarter's building HVAC system, including a dedicated outdoor air system to optimize performance by reconfiguring internal components with bypass dampers. The company is supporting name of a conference area as the Reuben Trane Executive Conference Room.

"Through technology and innovation, Trane continues to support engineers in our industry," John W. Conover IV, Trane president, Americas, said. "Our donation to the ASHRAE Headquarters living lab is a symbolic way to demonstrate our continued dedication to ASHRAE and to engineers at large."

Other donors to the project are Aircuity Inc., whose sensing system senses a broad array of indoor environmental parameters and integrates this information with the onsite building management system for control of the indoor environment, and Interface FLOR, which provided modular carpet in most spaces of the Headquarters.

Also donating are Allsteel® /Ivan Allen; Mark H. Brandli/design principal for Richard Wittschiebe Hand; CxGBS; Dynamic Air Quality Solutions; EBTRON Inc. ; GE Power; Bill and Margaret Harrison; Bruce Hunn; ITT/Bell & Gossett/James M. Pleasants Co. ; NorthWrite Inc.; PolyCon Manufacturing; Thermal Gas Systems Inc.; U.S. Green Building Council; and VFA Inc.



Instructional Courses on Energy, IAQ Offered at ASHRAE '09 Conference

ATLANTA – A full slate of ASHRAE instructional courses are available for attendees at the ASHRAE 2009 Winter Conference and the AHR Expo in January.

Eleven three-hour courses, along with four six-hour courses, offered by the ASHRAE Learning Institute, Jan. 24-28, Chicago. For complete course and meeting registration, visit www.ashrae.org/chicago.

Professional Development courses taking place Saturday, Jan. 24, at the Palmer House Hilton are Complying with Requirements of ASHRAE Standard 62.1-2007, Exceeding Standard 90.1-2007, Testing, Adjusting, & Balancing and The Commissioning Process in New & Existing Buildings.

Short Courses taking place Sunday-Tuesday, Jan. 25-27, at McCormick Place in conjunction with the AHR Expo, are Humidity Control: Basic Principles, Loads, & Equipment; The Basics of a Proposed Standard on High Performance Green Buildings (Standard 189.1P); ; Introduction to Green Buildings & Sustainable Construction; Energy Management in New & Existing Buildings; Chilled Beam Technology; Low-Temperature Radiant Heating & High Temperature Radiant Cooling Systems; Installation of Residential Ventilation Systems (Standard 62.2); Healthcare Facilities: Best Practice HVAC Design Considerations & Criteria; Humidity Control: Applications, Control Levels, & Mold Avoidance; Healthcare Facilities: Best Practice Applications of HVAC Systems; and Introduction to Thermal Energy Storage Systems for A/C.

Healthcare Facility Design Professional

In response to overwhelming support from membership, in 2006 ASHRAE dedicated resources to the development of personnel certification programs. ASHRAE's first ever certification program, the Healthcare Facility Design Professional (HFDP), launched in June 2007. The second program, the High-Performance Building Design Professional (HBDP) program, launched one year later, in June 2008. Two more programs – in building operations and maintenance and in commissioning process management, respectively, will launch in 2009.

Each ASHRAE certification program will have its own eligibility requirements that candidates must meet in order to be eligible to earn that certification. These requirements will consist of sets of stated combinations of education and experience in the HVAC&R industry. Each candidate will be required to submit a completed application indicating how he or she meets the eligibility requirements for a specific certification program. After receiving approval from ASHRAE, the candidate will be instructed on how to register for the appropriate examination. A candidate who successfully passes an ASHRAE certification examination will be known as a Certificant. A new application will be required for each ASHRAE certification program. Membership in ASHRAE will not be required for participation in any ASHRAE certification program. However, ASHRAE members will receive discounts on certification examinations.

Each ASHRAE certification program meets the high standards you expect from the Society. Subject matter experts who represent a variety of perspectives develop both the content outline for a program and the program's certification examination. ASHRAE's intent is to make the certification programs as international as possible. So, for example, each program's eligibility criteria are written to recognize appropriate academic and work experience from anywhere on the globe. In addition, examination items reference both inches/pound (IP) and system international (SI) units of measurement.

For more information about ASHRAE's certification programs, please visit www.ashrae.org/certification

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.



Requirements to Standard 90.1 Proposed; Open for Public Comment

ATLANTA – Changes to the purpose and scope of ASHRAE/IESNA Standard 90.1 as well as new lighting requirements are being proposed through public review.

ANSI/ASHRAE/IESNA Standard 90.1-2007, Energy Standard for Buildings Except Low-Rise Residential Buildings, provides minimum requirements for the energy-efficient design of buildings except low-rise residential buildings.

Among the proposed addenda out for public review is addendum aq, which proposes changes to the purpose and scope of the standard. The proposed modification addresses applications not covered in the existing standard scope, such as requirements for laboratories, data center cooling and kitchen exhausts. It would also permit the 90.1 committee to address technologies, such as computer equipment and refrigerated casework, and would extend existing requirements for envelope, space cooling and lighting to a larger group of spaces where energy is consumed.

“ASHRAE is committed to substantially reducing energy use in buildings,” Mark Hydeman, vice chair of the committee, said. “This addendum is a critical step toward achieving that goal. For example, it requires all cooling and heating equipment that operates under standard conditions to comply with the existing minimum efficiencies of the standard regardless of the facility that they are in. Manufacturing and process environments often operate at much longer hours than office buildings and retail facilities, which served as the basis for the life-cycle cost analysis of the minimum efficiencies.”

Standard 90.1 currently addresses design and construction of buildings. The proposed addendum would add operation and maintenance, which allows incorporation of industry standards such as ASHRAE/ACCA Standard 180-2008, Standard Practice for Inspection and Maintenance of Commercial Building HVAC Systems.

The addendum also incorporates utilization of on-site, renewable energy resources.

“By including on-site and renewable energy resources in the scope, an appropriate mechanism was created for future requirements as well as credits for these energy resources not currently provided in the standard,” Hydeman said.

Proposed addendum aq is open for public review until Feb. 2.

Four other proposed addenda – ar, as, au and av – are open for review until Jan. 19, while a fifth addenda, at, is open until Jan. 4.

Proposed addenda ar and av are related to lighting efficiencies. Proposed addendum ar revises an earlier version of the standard where expanded exterior lighting power limits were put in place but details were not included on calculating installed power and its comparison to the limits. Addendum av would require that in all spaces where alterations take place, all requirements of section 9 are met, not just the lighting power density requirements.

The proposed addenda to ASHRAE/IESNA Standard 90.1 are available during their public review period. To read the addenda or to comment, visit www.ashrae.org/publicreviews

ASHRAE Hosts Conference on Net-Zero Buildings

ATLANTA – To help drive the building industry toward market-viable net-zero-energy buildings, ASHRAE is hosting a specialty conference on the topic in March in San Francisco.

“We have reached a time when the building industry is being called to shift to a new level of performance that will reduce our energy and carbon footprint,” Bill Harrison, ASHRAE president, said. “It is time to advance net-zero-energy building knowledge.” ASHRAE’s Countdown to a Sustainable Energy Future...Net-Zero and Beyond conference takes place March 29-31 at Hyatt at Fisherman’s Wharf in San Francisco. The conference will provide a forum to discuss the role of policy and regulatory involvement in addition to providing application knowledge for the various aspects of net-zero-energy buildings for both residential and non-residential buildings. It will include building science, energy efficiency in HVAC, lighting and appliances, and renewable energy sources applied to buildings.

To register or for more information, visit www.ashrae.org/netzeroconference

ASHRAE defines net-zero-energy buildings as those which, on an annual basis, use no more energy from the utility grid than is provided by on-site renewable energy sources. These buildings use 50 to 70 percent less energy than comparable traditional buildings, and the remaining energy use comes from renewable sources, like solar panels or wind turbines incorporated into the facility itself, according to Harrison.

He noted that the state of California recently announced its goal of new residential developments being net-zero-energy by 2020 and new commercial developments being net-zero by 2030.

“As the industry seeks solutions to these challenges, ASHRAE must be there to help disseminate the knowledge,” he said.

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