



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

LONDON CANADA CHAPTER #116

<http://LondonCanada.AshraeChapters.org>

Mon Nov 21/2011

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## Topic

**Energy Reduction  
Tools and Good Practices**

## Speaker

**Stephen Dixon  
TdS Dixon Inc**

## Meeting - Mon Nov 21/2011

>>> Michael's On The Thames <<<  
1 York Street  
London

4:00pm - Chapter Board of Governor's Meeting

5:30pm Social      6:00pm-Dinner  
7:15pm - Program

\$45.00 for London Chapter dues paid members  
or \$200.00 for meal plan

\$50.00 for others

\$10.00 Students with valid student card FREE

## Meeting - RSVP

<http://www.surveymonkey.com/s/YV8ZYTl>  
please register at SurveyMonkey site if you plan on attending the meeting



## Presidents Message

I first would like to thank all the students who came out to last months meeting at Windermere Manor I believe we had 65 people attend so again thank you.

This month our meeting is a week early on the 21st and for the first time we will have our meeting at "Michaels on the Thames" restaurant. Our speaker this month is Mr. Stephen Dixon from TDS Dixon Inc. from Waterloo and his talk will be on "Energy Reduction Tools and Good Practices".

Just a reminder that there is no meeting in December but we have been discussing the possibility of a social event but dates are filling up everyone calendar pretty quick but we will let everyone know what we decide.

We have a busy second half of the year to the ASHRAE 2011-2012 coming up again we have some great speakers lined up and we also going to continue changing the location of the monthly meetings.

I look forward to seeing all of you on the 21st.

Jason Vandenberghe  
Chapter President 201/0/2012  
ASHRAE London Canada Chapter

## November Topic

Stephen will provide insight into the use of energy data analysis and monitoring for the purpose of revealing energy savings opportunities.

Techniques covered will include demand profiling - leveraging power factor data and load duration, change-point analysis with CUSUM and RETScreen including the new performance analysis features of RETScreen Plus.

## November Speaker Bio

Stephen Dixon, B.Sc., M.A.Sc.

Stephen Dixon is a freelance energy consultant. As Principal of TdS Dixon Inc., of St Jacobs, Ontario, he brings a practical, hands-on approach to the challenge of developing the energy management capacities of a broad range of institutional, commercial and industrial organizations. Stephen has accumulated over thirty years of energy management experience, including more than 600 energy audits and the facilitation of over 1000 energy management workshops. Stephen holds an M.A.Sc. in Systems Design Engineering from the University of Waterloo and a B.Sc. in Physics from UPEI.

## Research Promotion

\$11,000

Another month has passed since our last meeting – Christmas is just around the corner. Can you believe it!

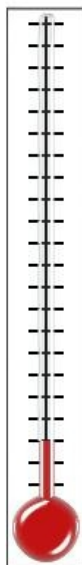
We have been busy thinking of new ways to raise Research funds for ASHRAE at the local chapter level, and are looking for everyone's assistance with this very important mission... we are a long way from our target, but so far are doing much better than last year at this time.

We look forward to speaking to each and every one to ask for your contributions to this very worthy cause.

Our future as an organization depends on its members and their contributions of not just money, but also their time to ensure the continued health and well-being of ASHRAE.

See you at the November meeting...

Eric Shaw  
Chapter Research Chair 2010/2012  
ASHRAE London Canada Chapter



\$900

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## Membership

Greetings from the membership chair,

This past month 3 new members have joined ASHRAE London Chapter. We as the local Chapter continue to encourage our members to seek out anyone in the industry who may benefit from being connected with ASHRAE. Please contact me if you have any questions regarding membership.

We also continue to encourage membership advancement for any associate members that are eligible. Please see last months newsletter for details.

Best Regards,

Jordan Foster  
Chapter Membership Chair 2011/2012  
ASHRAE London Canada Chapter

## New Member News

Jeff Watson was born in London and raised just outside of Parkhill. He attended Carleton University, where he received his degree in Aerospace Engineering in 2005. After graduation he moved to Manitoba and worked for a year in the Manufacturing Industry before accepting a position at a small Winnipeg Consulting Engineering Firm. Jeff spent 4.5 years at this firm learning about the HVAC industry while working on a wide range of buildings including residential, commercial and educational facilities. He received his Professional Engineering Licence in Manitoba this past summer. Jeff, along with his fiancé and 3 year old daughter, recently relocated to London after he accepted a Mechanical Engineering position at Chorley + Bisset Ltd.

### ASHRAE and Penn State Partner on Building Efficiency Hub

Philadelphia - A newly signed memorandum of understanding brings together ASHRAE and Pennsylvania State University (Penn State) to improve energy efficiency and reduce the environmental impact of buildings through the Greater Philadelphia Innovation Cluster (GPIC) for Energy-Efficient Buildings.

ASHRAE and Penn State signed the memorandum today to pursue common objectives related to GPIC. GPIC is a 24-member consortium, being led by Penn State, which has been designated as an Energy Innovation Hub of the U.S. Department of Energy and is located at the Navy Yard in Philadelphia, Pa. The goals of GPIC are to transform the building retrofit industry from serial fragmentation to integrated systems methods, to improve design tools, building systems, public policies, market incentives and workforce skills needed to achieve a 50 percent reduction of energy use in buildings, and to stimulate private investment and quality job creation in Greater Philadelphia and beyond.

"ASHRAE is looking forward to working closely with Penn State and other GPIC members on improving energy efficiency and reducing carbon emissions," Ron Jarnagin, ASHRAE president, said. "GPIC represents an exciting step forward in finding ways to increase energy efficiency. ASHRAE is happy to bring the knowledge and technical expertise of its volunteer members to the table to help create a broader knowledge of energy efficient and sustainable building practices."

"ASHRAE brings a tremendous amount of technical knowledge and experience that will be very useful to the GPIC as we strive toward solving one of the nation's most serious energy problems by dramatically reducing energy consumption in commercial buildings. Together, we can create quality jobs in the region and boost the building industry," Henry Foley, executive director of the GPIC and vice president for research for Penn State, said.

ASHRAE will assist in the GPIC effort in several areas, including research, education, certification, standards and guidelines and by applying the society's Building Energy Quotient (bEQ) program to buildings at the Navy Yard. ASHRAE may also help obtain As-Designed and In-Operation bEQ ratings for buildings in Greater Philadelphia and can ensure that GPIC considers use of ASHRAE certifications to support its objectives.

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### *ASHRAE's HVAC Design Essentials*

Real-world HVAC Design Skills You Can Use Today

ASHRAE created the HVAC Design Essential Workshop to provide intensive, practical training for HVAC designers and others involved in the delivery of HVAC services. Developed by industry-leading professionals, this workshop provides you with the fundamental and technical aspects of HVAC design in commercial buildings.

In three days, you will gain practical skills and knowledge in designing, installing and maintaining HVAC systems that can be put to immediate use. The workshop provides real-world example of HVAC systems, including calculations of heating and cooling loads, ventilation and diffuser selection using the newly renovated ASHRAE Headquarters building as a living lab. Engineered drawings of the ASHRAE Headquarters renovations will be incorporated to expose you to plan reading and graphical understanding of system design.

#### Workshop Topics:

- Fundamentals
- Heating/Cooling Load Calculation
- System Selections
- Common System and Components
- Cooling System
- Basic Design of Hydronic Systems
- Basic Design of Air Systems
- Control/BAS Commissioning
- Sustainable Design
- Project Management and Other Soft Skills
- Introduction to Technical Sales

When: January 11-13, 2012

Where: ASHRAE Foundation Learning Center, Atlanta, GA

Cost: \$1,189 (ASHRAE Member: \$939)

<http://www.ashrae.org/education/page/Registration>

### *New ASHRAE Handbook Volume Tackles Tall Buildings*

ATLANTA Tall buildings can be a tall order for HVAC designers. The newly published 2011 ASHRAE Handbook—HVAC Applications has a new chapter that focuses on the unique design issues that tall buildings present.

2011 HVAC Applications also contains 60 other chapters on a broad range of applications, written to help HVAC&R design engineers and others use the fundamentals, equipment and systems described in other ASHRAE Handbook volumes.

"HVAC Applications has up-to-date, real-world guidance from many of the world's leading authorities in their areas of expertise," Rex Noble, chair of the subcommittee that supervised the 2011 revision of the volume, said. "This volume covers an incredibly wide variety of topics, from residential, commercial, educational and health care facilities to agriculture, aircraft, fire and smoke management, solar energy, seismic- and wind-resistant design—even nuclear facilities. In addition to the new chapter on tall buildings, we have a second new chapter on ultraviolet germicidal irradiation."

The cost of the 2011 ASHRAE Handbook—HVAC Applications is \$195 for the print version, which includes a searchable CD, or \$165 for the CD only. ASHRAE members receive the print/CD version as a member benefit. The 2011 HVAC Applications volume also is being added to ASHRAE Handbook Online, (available at <http://handbook.ashrae.org>).

To order, contact ASHRAE Customer Service at 1-800-527-4723 (United States and Canada) or 404-636-8400 (worldwide) or visit [www.ashrae.org/bookstore](http://www.ashrae.org/bookstore).



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We are pleased to invite you to an open house at our New London Branch Office on Tuesday Nov 22nd 2011 from 11:30AM till 6:30PM. With the opening of this new office, we are committed to providing local support to customers in London and surrounding areas.

Our office Address is as follows below:

Belnor Engineering Inc.  
Victoria Professional Centre, Suite 603  
111 Waterloo Street  
London Ontario N6B 2M4

Ph: 519-434-6372

Fax: 866-280-5064

#### Agenda:

Meet with Belnor Service & Sales employees at the new branch

#### Displays:

- Phoenix Control products and literatures
- Strobic Fans literatures and data sheets
- Paragon Controls product data sheets
- Movex product data sheets

\*Lunch and refreshments would be served.  
Feel free to visit during your lunch time or after office hours.

Please confirm if you will be able to visit during lunch for us to order lunch accordingly.

We look forward to seeing you on Nov 22nd.

Regards,  
Arun Arora  
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## **ASHRAE Presidential Member Bellenger Remembered**

ATLANTA— Immediate past ASHRAE President Lynn G. Bellenger, who served as the first woman president in the Society's 116 year history, passed away Wednesday, Oct. 19. She was president for the 2010-11 Society year, with her term ending in June 2011.

Bellenger, P.E., Fellow ASHRAE, was a recognized expert in energy management, with a strong focus on the need for energy modeling to help create and refine more efficient buildings. She was a partner, Pathfinder Engineers & Architects, Rochester, N.Y.

"We at ASHRAE are greatly saddened by the death of our former president and our friend," Ron Jarnagin, ASHRAE president, said. "Her lifelong passion for engineering excellence resonated within our membership and our industry, inspiring us through her belief that engineers will lead an energy revolution with innovation. Through her service, she showed that there is a path available to all who wish to extend the influence of engineering principles to better serve the world we live in."

As ASHRAE president, Bellenger focused on Modeling a Sustainable World, sharing her thoughts about the role of modeling tools and how all involved in the built environment industry must come together to take advantage of "the rich opportunities for optimizing building performance through a collaborative approach from the beginning."

In an interview last year, Bellenger talked about her involvement in energy efficiency and how much has been put in recent years on the need to save energy.

"One of the cool things about the sustainability movement is that it has ignited a passion in people that is changing the world. That passion has brought a sense of energy and excitement to the industry and attracted people who are committed to designing and operating sustainable buildings. I don't see that changing in the future," she said.

Bellenger was a recipient of an ASHRAE Exceptional Service Award, a Distinguished Service Award, two first-place ASHRAE Technology Awards and the Lincoln Bouillon Membership Award.

She received a Bachelor of Science in mathematics from Principia College and a Master of Science in environmental science from Rutgers University.

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### **DOE Updates National Reference Standard for Commercial Buildings to 90.1-2010**

ATLANTA Following preliminary analysis that ASHRAE/IES's 2010 energy efficiency standard contains significant energy savings over the 2007 standard 18.2 percent source energy savings and 18.5 site energy savings the U.S. Department of Energy (DOE) has issued a ruling that establishes the 2010 standard as the commercial building reference standard for state building energy codes.

In an announcement in the Oct. 19 edition of The Federal Register, DOE attributes the greater energy savings to improvements in ANSI/ASHRAE/IESNA Standard 90.1-2010, Energy Standard for Buildings Except Low-Rise Residential Buildings, related to better lighting, daylighting, controls and building envelope and better mechanical systems and application to more systems. With the Oct. 19 ruling, Standard 90.1-2010 serves as the commercial building reference standard for state building energy codes under the federal Energy Conservation and Production Act. As a result, states are required to certify by Oct. 18, 2013, that they have updated the provisions of their commercial building code regarding energy efficiency to meet or exceed 90.1-2010.

"The foundation of energy efficient buildings continues to grow stronger with the news that DOE is now referencing the 2010 standard," Ron Jarnagin, ASHRAE president, said. "ASHRAE hopes to make that foundation even stronger through our current work with IES developing the 2013 standard."

"The DOE has determined that the quantitative analysis of the energy consumption of buildings built to Standard 90.1-2010, as compared to buildings built to Standard 90.1-2007, indicates national source energy savings of approximately 18.2 percent of commercial building consumption," according to DOE. "Additionally, DOE has determined site energy savings are estimated to be approximately 18.5 percent."

The DOE noted that the newer version of the standard contains 19 positive impacts on energy efficiency. These impacts included changes made through the public review process in which users of the standard comment and offer guidance on proposed requirements. Specifically the positive impacts include:

- Requirements for daylighting controls under skylights and commissioning of daylighting controls; increased use of heat recovery; cool roofs in hot climates; lower illuminance in certain exterior zones; skylights and daylighting in some building types; reduced ventilation energy; supply air temperature reset for non-peak conditions; efficiency requirements for data centers; lower lighting power densities; control of exterior lighting; occupancy sensor for many specific applications; daylighting control requirements for side-lighted spaces; and daylighting controls in more spaces.
- Updated chiller efficiency requirements.
- Extension of VAV fan control requirements.
- Expansion of new lighting power densities to more retrofits and automatic damper requirements and use of economizers
- Minimizes exceptions to switched receptacle requirement.

The ruling comes on the heels of a July announcement that established the 2007 standard as the as the commercial building reference standard for state building energy codes. The DOE noted that because the 2010 determination was published prior to the two-year deadline states have to demonstrate that their energy code meets or exceeds the stringency of the 2007 standard, states are allowed to file just one certification to address both determinations.



2012 Winter Conference  
ASHRAE Tech Program Focuses on Current Practices

ATLANTA Current practices related to hot industry topics, such as energy modeling, high performance buildings and integrated design, are featured in the Technical Program at ASHRAE's 2012 Winter Conference.

The 2012 Winter Conference takes place Jan. 21-25, Palmer House Hilton, Chicago. The ASHRAE co-sponsored International Air-Conditioning, Heating, Refrigerating Expo®, held in conjunction with the Winter Conference, will run Jan. 23-25 at McCormick Place.

"The 102 sessions in the Technical Program provide attendees the information they need to stay competitive and educated in today's market," Dennis Wessel, chair of ASHRAE's Conferences and Expositions Committee, said. "The program features 10 program tracks that provide plenty of case study and current-practice sessions on a wide range of pertinent subjects that provide insight into how to do a job better or more efficient."

The technical program features more than 100 programs by nearly 300 speakers with tracks on Energy Efficiency New Applications and Technology; Energy Modeling Applications; High Performance Buildings; HVAC&R Fundamentals and Applications; HVAC&R System and Equipment; Installation, Operation and Maintenance of HVAC Systems; Integrated Design; Professional Skills; Refrigeration; and Specialized Applications Healthcare, Laboratories and Data Centers.

As an added benefit, there is a new "mini-conference" on Installation, Operation & Maintenance of HVAC Systems built within the Technical Program. The O&M mini-conference is scheduled on Sunday and Monday.

ASHRAE is also offering a free Conference session at the Expo. This session brings to AHR Expo attendees a program that advances their knowledge on a particular topic. This session is titled "Selection, Operation and Maintenance and Water Treatment for Multi-Metal Boilers" and takes place Monday, Jan. 23, 3 p.m.-4:30 p.m., S106A, McCormick Place. No badge or ticket is required to attend.

In total, the program includes nine technical paper sessions, 31 conference paper sessions and a poster session 54 application-oriented, non-paper seminars and eight open discussion forums.

Highlights of the Technical Program include:

Energy Efficiency track: "DOAS Parallel Systems, Configuration and Control" and "Case Studies: New Equipment and Applications"

Energy Modeling Applications track: "Integrated Multi-domain Simulations for Innovative Building Design and Operation"

High Performance Buildings track: "Advanced Control and Diagnostic Techniques for Efficient Operation of High Performance Buildings," "UK Perspectives on Incentives for Technologies to Reduce Energy Use," "Thermal Displacement Ventilation Applications for High Performance Buildings"

HVAC&R Fundamentals and Applications track: "How to Specify Seismic Certification," "Loads on the Move: Mobile Apps"

HVAC&R Systems and Equipment track: "Chicago Smackdown: Air-Source vs. Ground Source or Best Practices for Air-Source vs. Ground-Source Heat Pump Systems," "Water-Cooled VRF Systems: An Introduction," "Back to Basics: Selection of Proper Chiller Technology"

Integrated Design track: "Streamlining BIM through Open Information Exchanges," "Advancing the 'I' in BIM"

Professional Skills track: "Protecting Your Design Against Changing Requirements," "Increase the Impact of Your Presentation"

Refrigeration track: "Industrial Refrigeration Worst Practices," "Magneto-Caloric Refrigeration: Are You Attracted to Cool Ideas?," "Advancements and Trends in Low Global Warming Impact Technologies"

Specialized Applications Healthcare, Laboratories, and Data Centers track: "Optimizing Cleanrooms for High Performance, Energy Reduction and Sustainability," "Liquid Cooling Technologies to Enable High Density and Improve Energy Efficiency of Information Technology Data Center Facilities"

The full Technical Program offers the opportunity to earn a year's worth of PDHs, NY PDHs, AIA LUs and LEED® AP credits.

For more information on the ASHRAE Conference, visit [www.ashrae.org/chicago](http://www.ashrae.org/chicago). For more information on the AHR Expo, visit [www.ahrexpo.com](http://www.ahrexpo.com).

The Chicago Virtual Conference is included with a paid Conference registration—comp and single day registration excluded—and includes on-demand access to all speakers' audio presentations synced to their presentations. Attendees and speakers can post comments on the presentations for a two-week period following the completion of the Conference. Those not attending the Chicago Winter Conference in person may register for the Virtual Conference only. Register at [www.ashrae.org/chicagovirtual](http://www.ashrae.org/chicagovirtual).