



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

LONDON CANADA CHAPTER #116

<http://LondonCanada.AshraeChapters.org>

Mon Oct 26/2009

## Board of Governors

### **President**

Eric Shaw  
ph: 519-964-0022  
eshaw@baymarsupply.com

### **Vice President & Program**

Jason Vanderberghe  
ph: 519-670-8066  
jasonv@aquatech.ws

### **Treasurer**

Jack Maynard  
ph: 519-681-1221  
jack.c.maynard@jci.com

### **Secretary**

Jamie Kruspel  
ph: 519-667-3445  
jamie.kruspel@td.com

## Committee Chairs

### **Research**

Karl Gilroy  
ph: 519-451-5100  
kgilroy@price-hvac.com

### **Membership**

Scott Turner  
ph: 519-681-1977  
scott@somersep.com

### **Student Activities**

Ibrahim Simhat  
ph: 519-681-1221  
ibrahim.semhat@jci.com

### **Past President**

Scott Edmunds  
ph: 519-667-4108  
sedmunds@uniongas.com

### **History & Newsletter**

Tom Pollard  
ph: 519-685-2570  
tpollard@execulink.com

TOUR & TOPIC:

## **LEED IS NOT COMMISSIONING**

**Mr William (Bill) McCartney**

Vice-President

Isotherm Engineering Ltd.

## **Meeting - Mon Oct 26/2009**

Membership Night

### **The Lamplighter Inn**

591 Wellington Rd., London

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

\$35.00 for London Chapter dues paid members  
or \$175.00 for meal plan

\$10.00 for Students with valid student card

\$45.00 for others



**President's Message:**

Fall has arrived, and the white stuff is just around the corner.

Our first meeting of the 2009 fiscal year was a resounding success. The tour of the UWO Student Sports Fitness Complex was well attended with more than 50 people participating.

The monthly meeting and dinner was held at the Windermere Manor, and a very well prepared meal was enjoyed by all.

This month is quickly coming to a close, and there are a few noteworthy events to be aware of.

The Hamilton Chapter is hosting their 50th Anniversary Meeting this coming Thursday, October 22nd (not their normal Tuesday event) – the meeting is being held at the Royal Hamilton Yacht Club. Here is a link to the Hamilton Chapter "Airways" newsletter and the meeting info details...

<http://vaxxine.com/ashrae/Airways/CurrentAirways.pdf>

This meeting will be a lunch time meeting – social hour from 11:30 TO 12:30, and then lunch will be served. The speaker will be starting around 2PM.

The speaker will be the current ASHRAE Society President – Gordon Holness – he will be speaking on "Energy Efficiency in Existing Buildings" – a very interesting presentation for those of you that may have missed his presentation at our meeting last year.

Please show the Hamilton Chapter your support by attending the meeting if you can make it. I am sure that they will appreciate our participation.

Our meeting this month will be at the Lamplighter Inn on the 26th of October – W. J. (Bill) McCartney will be coming from Hamilton to speak on "LEED is not Commissioning".

The Board of Governors is looking for feedback from the membership as to their opinion of our meeting at the Windermere Manor – we would like to hold a few more meetings there if the support of the membership indicates an interest.

We are also looking for members who would like to get involved and assist with the London Chapter functions and helping with meeting planning and organizing.

We hope to see everyone out to our next meeting at the end of this month .....

Eric Shaw

President - ASHRAE London Canada Chapter

**BAYMAR**  
SUPPLY LTD.

**Eric W. Shaw**  
Sales Manager, London District

241 Consortium Crt.  
London, Ontario N6E 2S8  
Tel: (519) 964-0022  
Cell (519) 851-8000  
Fax (519) 680-7039  
[eshaw@baymarsupply.com](mailto:eshaw@baymarsupply.com)  
[www.baymarsupply.com](http://www.baymarsupply.com)

**AERCO**  
York® Engineering Systems Group

**MITSUBISHI ELECTRIC**

**VENMAR**  
VENTILATORS

**SIEMENS**

Siemens Building Technologies, Ltd.

514 Newbold Street  
London, Ontario  
N6E 1K6 / Canada  
Tel: (519) 680-2380 ext. 2805  
Fax: (519) 680-2410  
[eric.salin@siemens.com](mailto:eric.salin@siemens.com)  
[www.siemens.ca/buildingtechnologies](http://www.siemens.ca/buildingtechnologies)

**Eric Christopher Salin**  
Account Executive  
Building Automation, Security,  
Integrated Building Technologies

Phone: (519) 268-3166  
Fax: (519) 268-3165  
Web Site: [www.erie-sheetmetal.com](http://www.erie-sheetmetal.com)

**ERIE**  
SHEET METAL  
INC.

HEATING  
VENTILATING  
CUSTOM FABRICATING

COMPUTERIZED PLASMA CUTTING  
INDUSTRIAL - COMMERCIAL

**JOE LEGUE**  
President

248 HAMILTON CRESCENT  
DORCHESTER, ONT. N0L 1G1

**IRONROSS INC. (est. 1986)**

*Manufacturers Agents for Industrial & Commercial Air Handling Products*

**FANS • COILS • AIR HANDLING UNITS • SILENCERS •  
ISOLATION • FILTERS • DAMPERS**

Jim Ironside      George Clark      Larry Mills (Sarnia)

678 BELMONT AVE. WEST, SUITE 304  
KITCHENER, ONTARIO N2M 1N6  
PHONE: 519-742-0171      FAX: 519-742-0543  
E-MAIL: [info@efi-ironross.com](mailto:info@efi-ironross.com)

**NORTHERN INDUSTRIAL**  
— FANS & BLOWERS —

**SCOTT C. DEAN, P. Eng.**

Tel: (519) 740-7000  
Fax: (519) 740-0051  
1-888-FAN-COIL  
[niscont@iprimus.ca](mailto:niscont@iprimus.ca)





4-122 Earl Thompson Rd, AYR, ON N0B 1E0





## **MEMBERSHIP**

Hello everyone just a short note to let you know that October will be our first Membership Promotion night. I would like to challenge existing members to extend an invitation to someone you may know that would benefit from belonging to ASHRAE to come out to our Oct. 26th meeting. Our next Membership Promotion night will be at our January Past President's meeting.

Lastly, just a reminder if you have not paid your dues for 09/10 to do so. If you are experiencing any difficulties please contact me at 519-681-1977 or email [scott@somersep.com](mailto:scott@somersep.com)

Regards,  
Scott Turner  
Membership Chair - ASHRAE London Canada Chapter

## **ASHRAE HAMILTON CHAPTER**

The Hamilton Chapter is holding a special 50<sup>th</sup> anniversary meeting on Thru Oct 22, 2009. The featured speaker is **Gordon Holness**, PE, Albert Kahn Associates / ASHRAE President who will be speaking on *"Energy Efficiency in Existing Buildings - Our Greatest Opportunity for a Sustainable Future"*.

Additional information on the Lunch time meeting can be found on the ASHRAE Hamilton web site:  
[www.vaxxine.com/ashrae](http://www.vaxxine.com/ashrae)

## **Previous Meeting Summary**

The ASHRAE London Chapter was able to review the newly completed Student Recreation Centre at the Univ of Western Ontario. The building has several exercise rooms, gyms, pool and locker rooms.

The dinner was held at Windermere Manor and also hosted the presentation on Natatorium Environmental Control by Mr Patrick Reynolds of PoolPak International. Mr Reynold reviewed issues that make a good and bad pool environment and explained that water treatment is just as important as air treatment.



Eric Shaw was thanked for his organizational skills as chapter president by Scott Turner during the business session.



**SOMERS** ENVIRONMENTAL PRODUCTS INC.

Daryl Somers, CET

96 Meg Drive  
London, Ontario  
N6E 3T7

Tel: (519) 681-1977  
Fax: (519) 686-9324  
Mobile: (519) 670-7720  
email: [daryl@somersep.com](mailto:daryl@somersep.com)

Norm Clarke, P. Eng.  
District Manager

Trane Canada  
8 Belleisle Court  
London, On N5V 4L2  
Tel 519 453 3010  
Fax 519 453 3024  
Windsor Tel 519 256 7922  
Sarnia Tel 519 337 0740

Jason Vandenberghe Technical Sales Representative

Sales & Marketing Inc.

4390 Paletta Court Burlington, ON L7L 5R2  
Bus: (905) 631 5815 Fax: (905) 637 8655  
G.T.A. Bus: (647) 288 0980 Cell: (519) 670 8066  
Email: [jasonv@aquatech.ws](mailto:jasonv@aquatech.ws)  
[www.aquatech.ws](http://www.aquatech.ws)

**ENGINEERING LTD**

Jim Bender, P.Eng.  
Contracting Sales  
#6 - 320 Neptune Cres.  
London, ON N6M 1A1  
Tel: (519) 457-6700  
Fax: (519) 457-8900  
[bender@htseng.com](mailto:bender@htseng.com)

Toll Free: (800) 341-3110

**PALSER**  
ENTERPRISES LTD.

**Hugh D. Palser**  
President

London, Ontario  
tel. 519-471-9382  
fax. 519-471-1049  
cell. 519-660-9135

Concord, Ontario  
tel. 905-738-5200  
fax. 905-738-6111

[hpalser@palserent.com](mailto:hpalser@palserent.com)  
[www.palserent.com](http://www.palserent.com)

**DURELL**  
CONTROLS

**CONTROL SYSTEMS INC.**  
Your Partner in Energy Savings... [www.durellcontrols.com](http://www.durellcontrols.com)

**Bob Durk - Manager**  
[bdurk@durellcontrols.com](mailto:bdurk@durellcontrols.com)

Phone (519) 652-5502  
Fax (519) 652-0265  
3392 Wonderland Rd. S., Bldg. 9, Units #1 & 2, London, Ontario N6L 1A8

**Delta**  
CONTROLS

**BACnet**

**HVAC ACCESS LIGHTING**  
Native BACnet



## **Speaker**

### **William (Bill) McCartney Vice-President Isotherm Engineering Ltd.**

Bill McCartney has over forty-three years experience in the HVAC&R industry and holds a Trade Certificate as a Refrigeration and Air Conditioning Mechanic.

Member of ASHRAE since 1974

Technical Committee 7.3 Operation and Maintenance Management

Member 1984 - present Chairman 1993

Technical Committee 7.9 Building Commissioning 2002 - present

TG-7 VRF - vice chair 2006 - 2009

Handbook Committee -  
Refrigeration Volume Member since 1998  
Volume Chair 2006 - 2010

Hamilton Chapter Past President 2004 - 2006

Region II Treasurer 2006 - 2009

Recipient of Distinguished Service Award

Commissioning Process Management Professional (CPMP) 2009

Founding Board Member for the Eastern Canada Chapter of Building Commissioning Association

## **Topic - LEED is not Commissioning**

While LEED has driven commissioning into projects that it would not otherwise be considered for,, this has also created much confusion as to what constitutes commissioning especially for the owner, design team, and contractors. The presentation hopes to define some of the commissioning responsibilities such as ASHRAE Guideline 0-2005, 1.1-2007 and discuss such areas as LEED NC, CI and EB:OM

---

## **Next Meeting - Mon Nov 30/2009**

Topic: CIPH & Hydronics in Canada

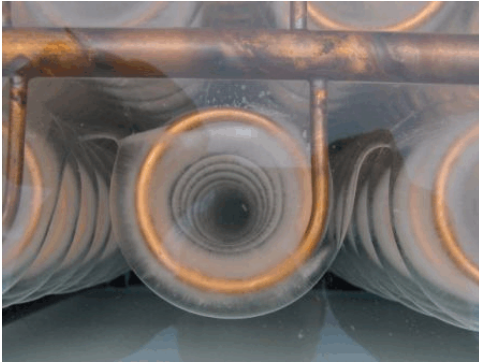
---





### **Small Commercial Thermal Energy Storage**

The concept of thermal energy storage is a well accepted practice in the HVAC field. It is mostly used in large scale applications, such as high-rise "slurry" systems. It is rare to see this technology applied on the small-scale, or small commercial applications. This designation refers to buildings less than 10,000 sq ft. For buildings in this range, non-traditional heating and cooling methods are usually avoided due to perceived high costs and/or long term pay-back. The perception of cost and payback is the challenge that must be overcome to comfort property managers and building owners.



A company from Colorado, USA has developed an "ice-battery" that is specifically designed to support five ton packaged roof-top units. These units are widely used in small-commercial applications. The device works by making ice in a large holding tank at night (off-peak hours) and then uses that ice to cool the rooftop units refrigerant during the day (peak hours). If the economizer is not suitable for the cooling load, the ice circuit will be used instead of the compressor to cool the refrigerant. It is claimed that 8-10 hours of cooling is available, but if a charge is fully exhausted, the third cooling option will be to run the compressor. It is expected that over a 24-hours cooling cycle, 5-10% electricity savings should be gained in addition to the shifted consumption. The device is the size of a standard roof-top unit, but considerably heavier (4,500 lbs). It can be successfully retro-fitted into an existing system, however additional structural support may be required if it will be roof mounted. The value of the device is that it shifts electricity consumption away from peak hours.

Soon in Ontario, and not long after, the rest of Canada, time-of use electricity billing is imminent. This change will be a catalyst for research into new methods of savings on utility costs. For small commercial buildings, air conditioning can account for up to 40% of total consumption. The value of load-shifting technology can be substantial as cost savings can be attained. This technology, thermal energy storage for small commercial, is being tested in London. The success of the installation will be verified and results will likely be shared with this ASHRAE Chapter. While this is only one example of a non-traditional cooling system implemented in a small commercial setting, others exist. It is the responsibility of the members of ASHRAE to explore and validate these technologies.

Jamie Kruspel  
Secretary - ASHRAE London Canada Chapter

---

### **ASHRAE Introduces Prototype of Building Energy Label at Annual Conference**

Program that aims to change the "face" of building energy use moves closer to official launch

ATLANTA – Most of us know the fuel efficiency of our cars, but what about our buildings? ASHRAE is working to change that, moving one step closer today to introducing its building energy labeling program with release of a prototype label at its 2009 Annual Conference in Louisville, Ky.

A prototype label for the ASHRAE Headquarters in Atlanta was unveiled. The Building Energy Quotient program, which will be known as Building EQ, will include both asset and operational ratings for all building types, except residential. ASHRAE is working with major real estate developers to implement the label prototype this fall with a widespread launch of the full program in 2010. For more information, visit <http://buildingEQ.com/>

"As the United States looks to reduce its energy use, information is the critical first step in making the necessary choices and changes," Bill Harrison, ASHRAE president, said. "With labeling mandatory in Europe and disclosure of a building's energy performance becoming required by several states, now is the time to introduce a label that can serve as a model for mandatory programs. ASHRAE's introduction of its prototype labeling program couldn't be better-timed."

Ron Jarnagin, who chairs the committee developing the label, noted that the market, with its move toward placing a premium on energy-efficient properties, would benefit from a labeling program.

"When potential building tenants and owners have information on the properties they are interested in, they can understand the full cost of their investment and place a value on the energy efficiency of a building," he said. "ASHRAE's label will help building owners differentiate their product in a technically sound manner while providing tenants with the tools they need to select energy-efficient spaces."

The ASHRAE labeling program differs from existing labeling programs in that it focuses solely on energy use. Under the ASHRAE program, new buildings will be eligible to receive an asset rating. An operation rating will be available once the building has at least one year of data on the actual energy use of buildings. Existing buildings would be eligible to receive both an asset and operational rating.

The asset rating provides an assessment of the building based on the components specified in the design and would be based on the results of a building energy model. The operational rating provides information on the actual energy use and is based on a combination of the structure of the building and how it is operated.



---

**New Publication Provides Energy Efficiency Guidance for Hotels**

ATLANTA – When visiting your next hotel, check to see if energy efficiency is on the amenities list. If it's not, it should be.

Recommendations on achieving 30 percent energy savings over minimum code requirements are contained in the newly published Advanced Energy Design Guide for Highway Lodging. The energy savings guidance for design of new hotels provides a first step toward achieving a net-zero-energy building.

"The recommendations allow the building industry to create more energy-efficient hotels while maintaining the quality and functionality of the space to provide a pleasant guest experience," said Ron Jarnagin, chair of the committee that wrote the book.

The book, published by ASHRAE, gives guidance to architects, engineers, contractors and other building team members on how to easily achieve advanced levels of energy savings without having to resort to detailed calculations or analyses. A few tips on how to achieve energy savings now are included below.

Written in partnership with The American Institute of Architects, the Illuminating Engineering Society of North America, the U.S. Green Building Council, and the U.S. Department of Energy, the book is available for free in electronic form at [www.ashrae.org/freeaedg](http://www.ashrae.org/freeaedg). Hard copies are available for purchase in the ASHRAE Bookstore through the same Web page.

The Guide focuses on typical hotels found along highways that have up to 80 rooms, generally four stories or less, that use unitary heating and air-conditioning equipment. Buildings of these types with these HVAC&R configurations represent a significant amount of commercial hotel space in the United States.

Examples of advanced highway lodging energy designs are provided in case studies to illustrate the recommendations and the flexibility offering in achieving the energy savings in the Guide.

Although the guidance targets new hotels, some of the design tips included in the guide that allow hotels to save energy immediately are appropriate for existing hotels as well:

**Lighting:**

In interior corridors, lighting often runs 24 hours a day. This is an area for possible daylight savings from top lighting (skylights) or occupancy sensors that reduce lighting when the space is unoccupied.

Use compact fluorescent lighting in downlights, wall sconces, and table lamps. Use incandescent lighting sparingly, such as in accent lighting of artwork or highlighting of special architectural features in the lobby. Use translucent wall sconces and table lamps to better light the space and patrons' faces.

Use compact fluorescent fixtures with electronic ballasts in all plug-in table and floor lamps in guest rooms, lobbies and common areas

**Hot Water:**

The least expensive means of reducing service water heating energy consumption is by reducing service hot water consumption.

Lower-flow shower heads can reduce hot water demand during showers from approximately 1.8 gpm to less than 1.5 gpm.

Low-flow lavatory faucets can produce similar hot water usage reductions for each lavatory.

**Laundry Service:**

Laundering of bed linens and towels consumes significant amounts of energy in highway lodging facilities. Water-conserving commercial washers consume roughly 25 percent less water per pound of laundry than conventional commercial washers and extract significantly more water from the load thus reducing the energy use required by the dryer.

The cost of the print version of Advanced Energy Design Guide for Highway Lodging, is \$62 (\$53 members). To download the free electronic version, please visit [www.ashrae.org/freeaedg](http://www.ashrae.org/freeaedg).

To order a print copy of the book, contact ASHRAE Customer Service at 1-800-527-4723 (United States and Canada) or 404-636-8400 (worldwide), fax 404-321-5478, or visit at [www.ashrae.org/bookstore](http://www.ashrae.org/bookstore)

---

**ASHRAE Seeks Proposals on User's Manual for Green Buildings**

ATLANTA—There are many ways to define a green building. Energy-saving measures, water efficiency, indoor environmental quality, materials and building orientations all play a role, but it is the way that all of these come together that makes a building truly high performing. Requirements to achieve green buildings will soon be available from ASHRAE, the U.S. Green Building Council and the Illuminating Engineering Society of North America in the form of a standard. Standard 189.1P, Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings, will define the minimum requirements for high-performance green buildings. And to make following those requirements easier, a user's manual also is being developed.

ASHRAE is currently accepting research proposals for development of a user's manual for Standard 189.1P. Proposals are due Nov. 9. For more information, visit [www.ashrae.org/technology/page/548](http://www.ashrae.org/technology/page/548). "The manual will provide users with a better understanding of how to apply the standard, as well as serve as a guide for self-education and training about the requirements and appropriate strategies to meet them," Kent Peterson, chair of the Standard 189 committee, said. "It will include worksheets and examples that can be used to determine compliance."

As part of its energy efficiency efforts, ASHRAE also is accepting proposals for a User's Manual for Standard 90.1-2010, Energy Standard for Buildings Except Low-Rise Residential Buildings. The 2010 standard, which will be published next year, is being developed with the goal of achieving a 30 percent energy cost savings improvement compared to the 2004 standard. More information on both projects can be found at [www.ashrae.org/technology/page/548](http://www.ashrae.org/technology/page/548).



**Existing Buildings Highlighted at ASHRAE Meeting**

ATLANTA – The need to improve the energy efficiency of existing buildings was highlighted at the ASHRAE 2009 Annual Conference held in Louisville.

At the meeting, ASHRAE launched the prototype of its Building Energy Quotient building energy labeling program, introduced a year-long focus on existing buildings and kicked off the Society's most highly anticipated certification program to-date, Commissioning Process Management Professional

Some 1,530 attendees came together to support the Society's mission of advancing HVAC&R to serve humanity and promote a sustainable world.

"In these economic times, dollars for new construction have dwindled," said Gordon Holness, ASHRAE president. "Given that more people are renovating than building new, now is the perfect time for ASHRAE to focus on reducing energy consumption in existing buildings to save money and reduce carbon emissions."

Gordon Holness, P.E., Fellow ASHRAE, Life Member, was inducted as the Society's president for 2009-10. Through his presidential theme, Sustaining Our Future by Rebuilding Our Past, Holness addresses energy efficiency in existing buildings.

"The vast majority of buildings that will exist in the year 2030 exist today," Holness said. "If we are to have a material impact on overall energy use, it is through renovation of existing building stock. While existing buildings present greater challenges, they offer us a greater opportunity to significantly impact our overall national energy demand, reduce our dependence upon imported oil and gas and minimize our carbon footprint. If ASHRAE is looking to build a sustainable future, we can set the foundations of that right now."

To read his presidential address, visit [www.ashrae.org/holness](http://www.ashrae.org/holness).

The Society launched its Building Energy Quotient program, known as Building EQ, which will include both asset and operational ratings for all building types, except residential. ASHRAE is working with major real estate developers to implement the label prototype this fall with a widespread launch of the full program in 2010. For more information, visit [www.buildingeq.com](http://www.buildingeq.com).

ASHRAE Learning Institute courses related to sustainability and high-performance building design were top drawers, including Basics of a Proposed Standard on High-Performance Green Buildings (Standard 189.1), Engineering for Sustainability: Understanding Air-to-Air Energy Recovery Technology and Applications, and The Commissioning Process and Guideline 0.

Top-attended technical program sessions included the poster session; Adapting Buildings and Cities for 3°C of Climate Change; To LEED or not to LEED: What are the IAQ and Energy Implications?; Proper OA Design Criteria for Sustainable Design and Efficiency; Real World BIM for the HVAC Engineer; Cities Are Not Sustainable: A Debate; Defining the Contribution of Fans in Achieving the Goals of ASHRAE Standard 90.1; Design of Hybrid Ground Source Heat Pump Systems; Optimizing of DX-DOAS Systems; How to Make Your Sustainable Building Work; Use of Liquid Desiccants for Improved Air Quality and Ventilation Air Energy Savings; Energy Efficiency and Application of Water to Water Heat Pumps in Residential Installations; Back to Basics - Motors and VFDs; Cooling of Telecom Centers; Free Cooling Opportunities for Data Centers; Avoiding Moisture and Humidity Problems During Part-Load Hours; Design Tools for Modeling Hybrid Geothermal Heat Pump (GHP) Systems; Energy Modeling for Large Building Systems; Successes and Challenges of Sustainable Building Metrics Implementation; and Is 30% More Outdoor Air Really Better?

Top-selling publications at the meeting were Guideline 0-2005, The Commissioning Process, Guideline 1.1-2007, HVAC&R Technical Requirements for the Commissioning Process, the ASHRAE Pocket Guide; ANSI/ASHRAE/IESNA Standard 90.1-2007, Energy Standard for Buildings Except Low-Rise Residential Buildings, and its User's Manual; the Load Calculations Applications Manual; and Best Practices for Datacom Facility Energy Efficiency, second edition. For more information on these books and more, please visit [www.ashrae.org/bookstore](http://www.ashrae.org/bookstore).

ASHRAE also launched its fourth certification program, Commissioning Process Management Professional, with some 80 people taking part. The examination will be available on computer at testing centers around the world by the end of August. For more information, visit [www.ashrae.org/CPMP](http://www.ashrae.org/CPMP).

At the meeting, the Host Committee displayed its sustainability footprint project - designed to leave behind a lasting sustainable footprint in the cities where the Society's meetings are held. Thanks to funds and equipment donated by members and others, 2 kilowatt of photovoltaic panels with an inverter to supply electricity was installed at Jeff Street Baptist Community at Liberty in Louisville. The church is part of the Louisville Kilowatt Crackdown program, which is a competition that promotes energy conservation within the business district of Louisville.

ASHRAE will hold its 2010 Winter Conference, Jan. 23-27 in Orlando, accompanied by the AHR Expo, Jan. 25-27.

**BACnet Technologies Well Positioned for Smart Grid Initiatives**

ATLANTA – At ASHRAE's Annual Conference in Louisville last week, the BACnet committee and its working groups considered how BACnet technologies can be used to aid development of standards to help Smart Grid efforts- as required by the Energy Independence and Security Act (EISA) of 2007- led by National Institute of Standards and Technology (NIST).

The BACnet committee's long-standing Utilities Integration Working Group has been engaging utility companies and working with national labs on grid related technologies like real-time pricing and automated demand response for many years. This group, which is being re-chartered as the Smart Grid Working Group (SG-WG), is well positioned to lead BACnet's efforts as the nation moves toward creating an interoperable Smart Grid.

The leader of the Smart Grid Working Group is also the leader of NIST's Building to Grid (B2G) Domain Expert Working Group. "We look forward to continuing collaboration among ASHRAE and NIST, Lawrence Berkeley National Laboratory, and other public and private industry organizations as the working group expands its focus to include all aspects of building integration into the Smart Grid, which includes not only communications with utilities and other grid service providers, but also efficient energy system management in buildings and homes," says David Holmberg, the working group's leader.

Aiding this effort is an update to the network security specifications for the BACnet protocol. The committee moved forward for publication an addendum that adds state-of-the-art digital signatures and encryption (SHA-256/HMAC and AES) to enable the creation of FIPS-compliant secure communications. This technology will be available on all BACnet media types and joins the capabilities of the certificate-based SSL/TLS that can be employed when using BACnet Web Services (BACnet/WS). Together, these technologies will serve the high security needs of the Smart Grid initiatives.

BACnet has been communicating on standard IP networks for more than 10 years now. To ensure that BACnet continues to integrate well into corporate infrastructures and to expand it into the emerging market areas enabled by ubiquitous IP networking, the committee has formed a new working group to investigate the opportunities for adopting more key capabilities and best practices from the Information Technology industry. This group will be working to facilitate the continued convergence of the IT and Building Automation infrastructures.

During the conference, the committee advanced ten addenda to final publication stage, created four new addenda for first public review, and revised six addenda for additional public review.

"With these activities, BACnet is showing its key strengths," says Dave Robin, chair of the committee. "It is both a mature technology and an ever-changing one. Driven by an open consensus-driven industry effort, BACnet always adapts to changing needs without losing the stable core that has ensured interoperability since 1995."

---

**Change to ASHRAE Residential IAQ Standard Facilitates IAQ Improvements**

ATLANTA – In a time when the U.S. economic stimulus plan is emphasizing retrofitting commercial and residential buildings, ASHRAE has approved a change to its residential ventilation standard to encourage home retrofits to improve indoor air quality. "With the U.S. economic stimulus having a great deal of focus on weatherization and other residential retrofits, we developed this change to help improve indoor air quality for public health and safety," Steven Emmerich, committee chair, said.

Addendum e to ANSI/ASHRAE Standard 62.2-2007, Ventilation and Acceptable Indoor Air Quality in Low-Rise Residential Buildings, allows alternative methods for meeting the standard's requirements regarding kitchen and bathroom exhaust fans. The standard currently requires fans in those rooms.

"For new construction or renovation, it's simple to meet those requirements," Max Sherman, former committee chair who now serves as consultant to the committee, said. "But the committee recognizes that installation of fans can be a barrier when added to existing homes in terms of expense and practicability. For example, an interior bathroom with ceiling joists running the wrong way may require ripping out a lot of ceiling and cutting studs to install ducting."

An example of an alternative compliance path that is allowed under the addendum would be increasing the overall whole-house ventilation rate to compensate for insufficient or non-existent bathroom exhaust.

While the alternative path could result in modest increased energy use due to the extra whole-house ventilation required, Emmerich notes that the proposal is being made because experience has shown that people doing retrofits will often ignore the standard if the fan requirements are too onerous.

"This can lead to poor indoor air quality," he noted. "So while the preferred method is to have the right size exhaust fan, we are proposing this alternative."

Addendum e can be found at <http://www.ashrae.org/62.2e>.

Standard 62.2 is the only nationally recognized indoor air quality standard developed solely for residences. It defines the roles of and minimum requirements for mechanical and natural ventilation systems and the building envelope intended to provide acceptable indoor air quality in low-rise residential buildings.