November 2010

Pile of Bones

Published by the Regina Chapter of the American Society of Heating, Refrigerating and Air Conditioning Engineers

President's Message

by Heric Holmes

Hi everyone,

I am really looking forward to the November 10th meeting on Commissioning. We will have representation from an owner, contractor, architect, commissioning agent and a mechanical engineer. Commissioning is an essential part of many projects and there are many ways to deliver it. The panel will describe methods that they use, what works and what does not. There will also be a question/answer session afterwards. Please pass the word to people outside of ASHRAE that may interested, as we want as diverse a crowd as possible.

October was a very good month for ASHRAE. As a sponsor of the Building Saskatchewan Green conference, we organized for Tom Watson, the Treasurer of ASHRAE Society, to perform one of Keynote speeches. He was able to provide insight to many people in the green building movement in Saskatchewan to the roles ASHRAE plays in sound green design.

Congratulations to MacPherson Engineering and Government Services, who won an ASHRAE Society Honourable Mention for the design of the 1913 Replacement Project at the Regina Provincial Corrections Centre. Congrats to all involved.

We are looking for volunteers for the ASHRAE golf tournament. If you are interested in helping out please contact Trevor Hobman.

I hope to see everyone at the meeting.

Meeting Notice

Wednesday, November 10, 2010

Hotel Saskatchewan - Radisson Plaza
2125 Victoria Ave. Regina, SK

5:15 pm - Cocktails
5:45 pm - **Program: Panel Discussion on "Commissioning for High Performance Buildings"**
6:45 pm - Dinner
7:30 pm - Chapter Meeting

Upcoming Events

November 25, 2010
Chapter Christmas Party
Casino Regina Show Lounge

Technical Program for November

Program: **Panel Discussion on "Commissioning for High Performance Buildings"**

Various industry associates will partake in a panel discussion where they will each discuss their role in the building commissioning process, along with commenting on challenges and benefits of the commissioning process. Chapter members and guests will then have an opportunity for questions or comments towards the panel participants.

THE 2010-2011 ASHRAE REGINA BOARD OF GOVERNORS

PRESIDENT

Heric Holmes
MacPherson Engineering

PAST PRESIDENT & RESEARCH PROMOTION

Greg Fluter
MacPherson Engineering

PRESIDENT ELECT & CHAPTER TECHNOLOGY TRANSFER CHAIR (CTTC)

Jason Danyliw
H.V.A.C. Sales (1997) Ltd.

VICE PRESIDENT & NEWSLETTER

Alana Yip
SaskTel

MEMBERSHIP CHAIR

Rob Craddock
Inland Metal

TREASURER

Kris Pockett
Kris Pockett Construction

SECRETARY

Carla Spriggs
HDA Engineering

STUDENT ACTIVITIES

Janel Walter
HDA Engineering

HISTORIAN

Jerry Boulanger
J-Clan Services Ltd.

WAYS & MEANS

Trevor Hobman
Cypress Sales Partnership

Regina Chapter Email Address:
mailto:ashraeregina@accesscomm.ca

Regina Chapter Website Address:
http://regina.ashraechapters.org/

2010/2011 MEETING & EVENT SCHEDULE

September 15, 2010
Tech. Talk: Ed Niznik of Refrigerative Supply Ltd.
Speakers: Garry Wasyliw, Manager of Building Standards & Brian Woronoski, Manager of Mechanical Review from the City of Regina

October 14, 2010
Distinguished Lecturer: Tom Watson - ASHRAE Overview & Updates

November 10, 2010
Panel Discussion on "Commissioning for High Performance Buildings"

November 25, 2010
***Christmas Social Event:* Casino Regina Show Lounge (Featuring the Original Blues Brothers Revue & Learn to Gamble)**

January 12, 2011
Presidential Visit - Lynn Bellenger

February 9, 2011
Tentative Distinguished Lecturer

March 9, 2011
Tentative Tour: Loblaws Facility

April 13, 2011
Student Night

April 21, 2011 - ASHRAE Society Satellite Webcast
Ground Source Heat Pump Systems – Putting the Earth to Work for You

May 11, 2011
Tech Talk: TBD
Speaker: TBD

June 2011
ASHRAE Research Golf Tournament
Date TBD

COMMITTEE CHAIR REPORTS

President Elect & CTTC
by Jason Danyliw

This month, we are glad to have the opportunity to have a panel discussion on "Commissioning for High Performance Buildings".

Various industry associates, including a mechanical consulting engineer, mechanical contractor, building owner, architect, and a commissioning agent will partake in a panel discussion where they will each discuss their role in the building commissioning process, along with challenges they see and also benefits from the process. Then the discussion will be open to the ASHRAE members and guests for additional questions and comments.

We look forward to seeing a large chapter and industry-wide attendance at the meeting to be a part of this informative discussion on a topic that everyone would benefit from knowing a little more about.

If you have any suggestions or comments regarding the meeting programs for this year, please feel free to contact me at jason@skhvac.com.

Student Activites
by Janel Walter

A reminder to all chapter members if you have any old ASHRAE handbooks, can you please bring them to a meeting, so we can donate them to the University of Regina. If you have handbooks to donate and cannot bring them to the meeting, please contact me at jwalter@hdaeng.com to make arrangements to get them to the University.

Vice President & Newsletter
by Alana Yip

Just a reminder that the next YEA (Young Engineers in ASHRAE) Leadership Weekend is April 1-3, 2011 in Denver. If anyone is interested in attending, please let me know. To attend, you need to be 35 years of age or younger and an ASHRAE member. It's a great opportunity to meet other young people in the industry and learn about becoming a leader in our workplaces and within ASHRAE.

Membership Promotion Chair
by Rob Craddock

The ASHRAE year is well on its way again. Our chapter currently has four people that have expressed interest in joining and three members that are delinquent. I have attached the quick and easy way to go on line to renew your membership and to update your ASHRAE Bio.

Members can follow these steps for dues renewal with the following steps:

1. Go to www.ashrae.org
2. Login as yourself
3. Click **Update Your Bio** the in left-hand column
4. Click **Member Dues Renewal** – it will generate a file you can print or save to PDF
   And while here, members can also update their bio to advance to Member grade!

I will be contacting those of our members that are eligible to upgrade their membership to Member from Associate and Affiliate. We also have a couple members that will be able to upgrade from Student to Associate.

If you can think of anyone who you think should be a member of ASHRAE, please let me know and I will contact them.

Membership Application

Application To Upgrade Membership

ASHRAE HVAC&R Industry eNewsletter
If you wish to subscribe to the ASHRAE HVAC&R Industry eNewsletter, e-mail subscribe-enews@ashrae.org with "Subscribe this address to The HVAC Industry eNewsletter" in the e-mail subject line.

ASHRAE HVAC&R Industry eNewsletter
If you wish to subscribe to the ASHRAE HVAC&R Industry eNewsletter, e-mail subscribe-enews@ashrae.org with "Subscribe this address to The HVAC Industry eNewsletter" in the e-mail subject line.

ASHRAE Learning Insitute
The ASHRAE Learning Institute is offering on-line courses. There are 2 ways to register:
1. Internet : http://www.ashrae.org/onlinecourses
2. Phone: Call toll-free at 1-800-527-4723
NOTE: You may register up to 24 hours prior to an online seminar. Course times are in Eastern US Time Zone.

Standard 90.1-2007 Available as Free Download

ATLANTA –In order to move the industry forward toward more energy efficient design, ASHRAE is making it easier than ever before to access its flagship energy standard, 90.1, available as a free download for a limited time.

Through a funding contract with the Department of Energy, copies of the I-P edition of ANSI/ASHRAE/IES Standard 90.1-2007, *Energy Standard for Buildings Except Low-Rise Residential Buildings*, are being offered as a free downloadable PDF at www.ashrae.org/standard901-2007-free, starting Oct. 22, 2010.

"Standard 90.1-2007 is widely used throughout the design community, and the download version makes it available to users at their own computers for ready and easy access," ASHRAE President Lynn G. Bellenger said. "Making the standard available for free ensures that it penetrates the marketplace and reaches owners, contractors and design teams. We appreciate the support of the Department of Energy in reaching a wider audience and extending access to our flagship energy conservation standard."

Since being developed in response to the energy crisis in the 1970s, Standard 90.1 has become the basis for building codes, and the standard for building design and construction throughout the United States.
As buildings consume approximately 40 percent of the primary energy in the United States, the standard is an indispensible reference for engineers and other professionals involved in the design of buildings and building systems.

Exam to First be Offered at 2011 AHR Expo
Take the Leap: Earn Your BEAP from ASHRAE

ATLANTA – With the growing emphasis on energy consumption reduction and cost savings, there is a recognized need for credible information to help in the assessment and modeling of energy use in buildings.

A new certification program from ASHRAE will help fill that need, recognizing individuals' ability to audit and analyze residential, commercial and industrial buildings. The Building Energy Assessment Professional (BEAP) certification complements ASHRAE's Building Energy Quotient program as well as its Building Energy Modeling Professional certification. Together, the programs provide a valuable toolkit when it comes to the evaluation and reduction of building energy use.

"We all know that 'we can't manage what we can't measure'," Tom Phoenix, chair of the committee that developed the BEAP certification, said. "Providing reliable energy analysis means we are holding ourselves more accountable for the energy our buildings use. The results of an analysis can tell us which systems are working efficiently and which systems provide opportunities for improvement."

The BEAP certification certifies individuals' ability to audit and analyze residential, commercial and industrial buildings including determining project scope, collecting data, analyzing building performance, interpreting results, evaluating alternatives, submitting recommendations for energy conservation measures and assisting with the implementation of these recommendations.

The program was developed in collaboration with representatives from ASHRAE's Building Energy Quotient (bEQ) program, the Illuminating Engineers Society, the National Institute of Building Sciences, the Sheet Metal and Air Conditioning Contractors' National Association and the Testing, Adjusting and Balancing Bureau.

The program launches Feb. 2, 2011 with a pencil and paper examination in conjunction with ASHRAE's 2011 Winter Conference. Learn more at www.ashrae.org/beap.

ASHRAE Publishes 2010 Editions of Refrigerant Safety Standards

ATLANTA – The 2010 editions of ASHRAE's major refrigerants-related standards have been published as a package with 14 new refrigerant blends added.
Requirements in ANSI/ASHRAE Standard 34-2010, *Designation and Safety Classification of Refrigerants*, and ANSI/ASHRAE Standard 15-2010, *Safety Standard for Refrigeration System,* complement each other in that Standard 34 describes a shorthand way of naming refrigerants and assigns safety classifications based on toxicity and flammability data, while Standard 15 establishes procedures for operating equipment and systems when using those refrigerants. ASHRAE sells the standards as a set.

Standard 34-2010 combines the 2007 standard and 37 published addenda. Among the key changes incorporated into the 2010 edition are:

- assignment of designations and safety classifications for one new single compound refrigerant and 14 new refrigerant blends
- addition of occupational exposure limits for refrigerants to Tables 1 and 2
- addition of new data and updates of refrigerant concentration limits (RCL) and safety classifications for several existing refrigerants
- addition of an optional 2L subclass to the existing Class 2 flammability classification, which signifies Class 2 refrigerants with a burning velocity less than or equal to 10 cm/s.
- introduction of a modified method of calculating the heat of combustion for refrigerants along with inclusion of an illustrative example of the calculation
- addition of an informative appendix showing an example of the calculation of the acute toxicity exposure limit and refrigerant concentration limit for a refrigerant blend

Changes to Standard 15 include incorporation of nine new addenda. The changes made through these addenda include:

- revision of requirements for terminating relief vent discharge lines
- revision to bring the standard into alignment with UL 984 (*Hermetic Refrigerant-Motor Compressors)*
- addition of definitions so the standard can better provide for the safety of cascade refrigeration systems
- revision to provide appropriate guidance for the protection of positive displacement compressors when used in cascade refrigeration system configurations
- revision to bring the standard into alignment with Standard 34, by removing Table 1 for "refrigerant quantity limits," and uniformly using the term "refrigerant concentration limits"

Standard 15-2010 and Standard 34-2010 are sold together. The cost is $89 ($75 ASHRAE members). To order, contact ASHRAE Customer Service at 1-800-527-4723, fax 404-321-5478, or visit www.ashrae.org/bookstore.

ASHRAE IAQ Conference to Focus on Creating Healthier, Infection-Free Environments

ATLANTA –The 2003 SARS episode, the H1N1 pandemic and avian flu have transformed the built environment landscape, raising not only significant public health concerns but also economic implications on a global scale. Recognizing the challenge of controlling the spread of infection, ASHRAE hold its IAQ 2010 Conference series in Kuala Lumpur, Malaysia, Nov. 10-12, 2010.

The focus of ASHRAE's IAQ 2010 Conference is airborne infection control. The conference explores related questions on the role of HVAC in airborne infectious disease transmission, evaluation of the various design and control strategies and technology, pandemic preparedness and airborne infection control for various applications such as healthcare facilities, air and surface transportation, schools, offices, etc.

Besides addressing thermal comfort and IAQ issues, buildings and other enclosed environments are increasingly faced with the challenge of providing a healthy environment. Airborne infection and its control in the built environment pose considerable challenges to mankind that rival the need to also address climate change and environmental sustainability.

This will have tremendous impact in the design, operation and maintenance of buildings and other enclosed environments. IAQ 2010 reviews the state of knowledge about airborne infection in such environments and helps define future directions.

One technical paper of interest is "Indoor Air Quality, Airborne Infection Control and Ventilation Efficiency in Hospital Operating Rooms." The HVAC airside system plays an important role in maintaining adequate hygiene levels in an operating theatre; this session introduces suitable design of such a system.

The workshop "Are Ventilation Systems Enough to Prevent the Dispersion of Airborne Infectious Diseases in Hospitals?" focuses on space designs and additional disinfection applications that can increase the performance of ventilation systems in hospitals.

IAQ 2010 is the 16th in the ASHRAE IAQ Conference series that started in 1986 and the first to be held outside the United States. For more information, or to register, visit www.ashrae.org/iaq2010.

ASHRAE, IES Join Forces on Residential Energy Standard

ATLANTA – The team that brought you the national standard for energy efficiency in commercial buildings has joined together to help homes attain higher levels of energy performance.

ASHRAE and the Illuminating Engineering Society of North America (IES) are working together to strengthen requirements in ANSI/ASHRAE Standard 90.2, *Energy Efficient Design of Low-Rise Residential Buildings*. Previously, the standard was developed only by ASHRAE and was first published in 1993.

Standard 90.2 provides minimum requirements for the energy-efficient design of residential buildings. Last year, ASHRAE's Board of Directors recommended to the Standard 90.2 committee that it consider a goal of writing the standard so that it is 30 percent more efficient than the 2004 version, including both a prescriptive and a performance path.

The standard would target home builders and code officials in an easy-to-understand format that is simple to use. The committee plans to have an advisory public review of the standard later this year to determine whether proposed changes are meeting the needs of the audience.

"ASHRAE is honored and proud to have IES as a co-sponsor of Standard 90.2," ASHRAE President Lynn G. Bellenger said. "The partnership between ASHRAE and IES originated 35 years ago when we joined together to create the first building energy conservation standard, ANSI/ASHRAE/IES Standard 90-1975, *Energy Standard for Buildings Except Low-Rise Residential Buildings*. The partnership has flourished as we've collaborated on updates to that standard and created Advanced Energy Design Guides. Now, as we focus on the residential market, whose 107 million housing units consume 22 percent of the primary energy in the U.S., we have the opportunity once again to define the actions needed to make energy conservation our 'first fuel.' By identifying ways for this major market to reduce energy use and costs, we serve the public and increase our energy security."

"The opportunity to be a cosponsor with ASHRAE on this standard continues the long standing and successful partnership on a trilogy of standards addressing energy conservation – Standard 90.1, *Energy Standard for Buildings Except Low Rise Residential Buildings*, Standard 100, *Energy Conservation in Existing Buildings*, and now 90.2 dealing with efficient design of low-rise residential buildings,"Rita M. Harrold, IESdirector of technology, said. "IES will contribute expertise in providing ways to achieve energy savings through lighting in this important market segment that consumes approximately 212 billion kWh per year, or approximately 15 percent of residential electricity consumption. The challenge here will be to achieve savings while still providing a quality environment to satisfy occupant needs."

2010 Energy Standard Provides for 20 Percent-Plus Energy Savings

ATLANTA – By following the guidance in the newly published 2010 energy standard from ASHRAE and IES, more than 20 percent energy reduction can be achieved over savings in the 2004 standard.

"This year marks the 35th anniversary of our flagship energy conservation standard, and the 2010 version of 90.1 represents a milestone achievement in increased energy and cost savings," Lynn G. Bellenger, ASHRAE president, said. "Working within the constraints of strict economic justification and a prescriptive format, the project committee has achieved remarkable energy savings across all building types and U.S. climate zones. The standard is written in mandatory code language and offers code bodies the opportunity to make a significant improvement in the energy efficiency of new buildings, additions and major renovations. We congratulate the project team and our partners of 35 years, the Illuminating Engineering Society."

"IES is pleased to continue in its role as a partner with ASHRAE in this 2010 edition of standard 90.1," Rita M. Harrold,director of technology, said. "Each revision brings new challenges to find ways to reduce energy. Our congratulations to the project committee for its diligence in identifying and demonstrating significant energy savings opportunities compared to the 2004 standard. IES contributions to the savings have been achieved by refining lighting power limits and placing more emphasis on controls and system energy use. We look forward to participating in future versions of the standard where even more focus will be placed on how we can support the goal of designing quality lighting while balancing human needs with energy and cost savings in all building types."

ANSI/ASHRAE/IES Standard 90.1-2010, *Energy Standard for Buildings Except Low-Rise Residential Buildings,* provides minimum requirements for the energy-efficient design of buildings except low-rise residential buildings. The standard contains 109 addenda approved since the 2007 standard was published.

At the time of publication, the energy cost savings of the new standard vs. the 2004 standard are estimated to be more than 20 percent. Not all addenda have been included in analysis for these energy savings estimates. Final savings estimates will be issued by ASHRAE when available.

How was the energy reduction achieved? Here are a few examples:

· The Scope was expanded so that 90.1 covers receptacles and process loads, including data centers. This allows future addenda to the standard to address energy consuming equipment and systems previously outside its scope.

· Continuous air barrier and cool/high albedo roof requirements were added.

· Lighting: Most interior Lighting Power Densities were lowered, and additional occupant sensing controls and mandatory daylighting requirements were added for specific spaces, along with a new five-zone exterior Lighting Power Density table.

· Mechanical: Most equipment efficiencies are higher, energy recovery is required in more applications, economizers are required in more climates and more energy-conserving controls are required.

· Modeling requirements have been clarified and expanded so that building modelers can more accurately compare energy cost of their building project with an appropriate baseline building as defined by the standard.

"The 2010 edition of Standard 90.1 represents a significant accomplishment by ASHRAE and IES to implement cost-effective measures for energy conservation in new buildings designed using the standard," Steve Skalko, 90.1 committee chair, said. Since being developed in response to the energy crisis in the 1970s, Standard 90.1 has become the basis for building codes, and the standard for building design and construction throughout the United States.

The cost of 90.1-2010 is $125 ($106, members). The standard is currently available as a PDF download with hard copies slated to be available for purchase later in November. Hard copies are now available for pre-order. To order, contact ASHRAE Customer Service at 1-800-527-4723 or visit www.ashrae.org/bookstore.

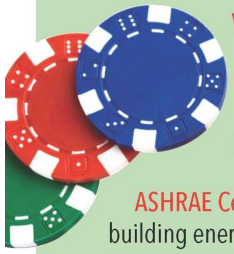
ASHRAE Holds the Sustainability Cards

Join ASHRAE at the 2011 Winter Conference, Jan. 29–Feb. 2, Las Vegas, Nevada

Zero ENERGY DESIGN
A SAFE BET

A full-house of professional and personal development activities are offered!

Technical Program–focused on the efficient use of energy, the greening of the industrial base, the real cost of zero-energy design



Virtual Conference–if you can't make it to Las Vegas, don't miss out on the knowledge shared in the technical program with the Virtual Conference

AHR Expo–the ASHRAE co-sponsored AHR Expo takes place Jan. 31–Feb. 2 at the Las Vegas Convention Center. www.ahrexpo.com

ASHRAE Certification–launch of a sixth certification program, targeting building energy assessors. Five existing certification programs also offered

ASHRAE Learning Institute–offers six Professional Development Seminars and 14 Short Courses – includes a new course on building energy modeling and updates to courses covering Standards 62.1 and 90.1

www.ashrae.org/lasvegas

Register before November 5 and SAVE!

The early bird fee is $505 ($685 non-members)

Concurrent with the ASHRAE Winter Conference . . .

AHR EXPO®

January 31 - February 2, 2011
Las Vegas, Nevada

FREE REGISTRATION

www.ahrexpo.com

EVENT HIGHLIGHTS

- Over 1,800 Exhibitors
- 50+ Educational Presentations
- Hundreds of New Products right on the Show Floor
- Special Exhibits and Presentations on new technologies promoting energy efficiency and sustainability
- 2011 AHR Expo Innovation Awards

*Expo **co-sponsored by ASHRAE** and held at the Las Vegas Convention Center adjacent to the Hilton.*

Regional XI Executive

Director & Regional Chair
Erich Binder Southern Alberta Chapter

Assistant Regional Chair
Kevin Marple Oregon Chapter

Membership RVC
Murdoch MacPherson Regina Chapter

Research Promotion RVC
Ray Sieber Regina Chapter

CTTC RVC
Eileen Jensen Oregon Chapter

Student Activities
Doug LeCren Alaska Chapter

Regional Historian
Bill Dean Saskatoon Chapter

Regional Treasurer
Rob Craddock Regina Chapter

Nominating Delegate
Kevin Marple Oregon Chapter

Nominating Alternate
Norm Grusnick B.C. Chapter

YEA Member
Tariq Amlani B.C. Chapter

Society Executive

President
Lynn Bellenger, Rochester NY

President-Elect
Ronald "Ron" Jarnagin, Richland, Wash.

Treasurer
Thomas "Tom" Watson, Staunton, Va.

Vice President
William "Bill" Bahnfleth, University Park, Pa.

Vice President
Sheila J. Hayter, Lakewood, Colo.

Vice President
Ross D. Montgomery, Palmetto, Fla.

Vice President
T. David Underwood, Mississauga, Ontario, Canada

If this newsletter was passed on to you and you would like to be added to the mailing list, please email me at alana.yip@sasktel.sk.ca. Also, if there are any comments regarding this newsletter, please drop me an email.