

Pile of Bones

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DECEMBER 2009

President's Message

by Greg Flutter

With the CFL football season over (we won't even go into that any further), and the snow finally arriving, I guess that means Christmas is fast approaching!

We had a great turnout for our November meeting held jointly with the local CSC chapter for the tour of the new Disease Control Laboratory. It was a good mix of members from the Regina engineering, architecture and construction community. I'd like to extend a thank-you to Grant Dawson and Ted Cooke from HDA Engineering for leading a couple of the tour groups through the building. It was a great tour. Also thank you to Dominion Construction for making the building available for the tour.

This month is our annual Christmas Social which will take place on **Thursday** December 10th at the Lazy Owl on the University of Regina Campus. Trevor has arranged for entertainment by Jack Skrip – Magician and Mentalist. Please see attached invite and

RRSP by December 7th to Trevor Hobman at [t.hobman@cypressales.com](mailto:t.hobman@cypresssales.com) if you are interested in attending. Bring your spouse and your friends. Cost is \$29.00 for members and \$54.00 for non-members.

Please note that our January meeting has been changed to **Tuesday** January 12th to accommodate a visit from ASHRAE Society President Gordon Holness. Please mark this date on your calendars. More info will follow as the meeting date approaches.

Last but not least, I'd like to wish each of you a safe and happy Holiday Season and all the best in the 2010.

Hope to see you on Thursday!

MERRY CHRISTMAS IN
MANY LANGUAGES:
German - Frohe Weihnachten
Hawaiian - Mele Kalikimaka
Spanish - Feliz Navidad
French - Joyeux Noël
Italian - Buon Natale
Greek - Kala Christougenna
Ukrainian - Srozhdestvom
Kristovym

Meeting Notice!

**Thursday
December 10, 2009**

**The Lazy OWL on the
University of Regina Campus**

6:00 –Social / Cocktails

7:00 - Dinner

Turkey with Cranberry Sauce

Garlic Roasted Potatoes

**House Salad w/ Choice of
Dressing**

Pasta Salad

Vegetable Medley

**Entertainment During and
After Dinner**

Social to Follow

Please note: Kris Pockett has sent out the 2009 / 2010 Chapter dues invoices. Please remit your payment as soon as possible, if you haven't done so already. If mailing, the payment should be sent to the Post Office Box number noted on the invoice. Feel free to bring your cheques to this month's meeting as well.

Please note: Anyone not having received their invoice, please contact via email: ashraeregina@accesscomm.ca

Technical Program for December

For our December meeting, we will be having Christmas Social.

The Christmas Social will be held at the Lazy Owl on the U of R Campus, with dinner and entertainment.

2009/2010 Meetings and Events Schedule

September 9, 2009: Darron Rempel - Chilled Beams and Displacement Ventilation

October 14, 2009: Darren Alexander (TWA Panel Systems) – Radiant Sails & Stanley Mumma, Distinguished Lecturer (DL) - DOAS Systems & Radiant Panels

November 18, 2009: CSC & HDA Engineering Ltd. - Saskatchewan Disease Control Laboratory Tour

December 10, 2009: Christmas Social – Dinner and Entertainment at the Lazy Owl on the U of R Campus

January 12, 2010: Presidential Visit

February 10, 2010: Shawn Wedewer - SRC presentation - Commercial Cogeneration

March 10, 2010: Tentative DL

April 14, 2010: Student night

May 12, 2010: To be Determined

June, 2010: ASHRAE Research golf tournament

Last month's meeting was a joint meeting with CSC (Construction Specifications Canada) which included a tour of the new Saskatchewan Disease Control Laboratory. It was a well attended meeting and I would like to thank Grant Dawson and HAD Engineering for their presentation. I would also like to thank CSC and Wyatt Ekert from P3 Architecture for helping with organizing and presenting at the meeting. Thanks to Dominion for allowing access to their construction site.

There is currently one meeting that presentations are not yet confirmed. We are still looking for some other local presentations for February or May.. If anyone has other suggestions for programs this year, please forward them to Heric at h.holmes@mac-eng.ca.

*Heric Holmes
President Elect and Chapter Technology Transfer Chair*

Membership Promotion Chair

by Rob Craddock

It's hard to believe that the Christmas season is once again upon us. But I would like to wish you and yours a very Merry Christmas, and all the best wishes for a happy and healthy 2010!

*Rob Craddock
Membership Promotion Chair*

Past President & Research Promotion Chair

by Ted Cooke

Big thanks to all of the ASHRAE Regina Chapter Board of Governors, not just for sacrificing your time but your money as well. Once again, the Board of Governors' have personally donated to the Research Campaign and the Regina Chapter will be receiving the Full Circle Award. An award that we have achieved for too many years to count.

*Ted Cooke
Past President & Research Promotion Chair*

Committee Chair Reports

President Elect and Chapter Technology Transfer Chair

by Heric Holmes

Student Activities Chair

by Dean Nagel

Please reference the following link for the 2010 ASHRAE Winter Meeting – Student section:
<http://www.ashrae.org/students/>.

If you are a student and are attending the ASHRAE Winter Meeting in Orlando, FL. as a student, the Technical Program & Expo are free for you to attend. There is an ASHRAE Student tour (limited space so register early) at the Florida Hospital (the site of the 2010 Student Design Competition). Please see the attached brochure for further information.

There is a Student Zone Quicklinks feature on the left-hand side of the main ASHRAE webpage that you would find very beneficial and useful. The website is www.ashrae.org.

Any chapter members having ASHRAE handbooks, please bring them to the January 2010 meeting so I can get them delivered to the University of Regina. If you can't bring them to the meeting, please contact me at dean.nagel@stantec.com.

Dean Nagel
Student Activities Chair

Vice President & Newsletter

by Jason Danyliw

May you take time to appreciate this festive, wonderful time of year. I wish you all a very Merry Christmas, and may 2010 bring you all joy, health and success.

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

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

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 Winter Conference 2010

January 23-27, 2010

Orlando, Florida

Please see the attached information.

AHR EXPO

January 25-27, 2010

Orange County Convention Center

Orlando, Florida

Go to www.ashrae.org for more information.

ASHRAE Learning Institute

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 (US and Canada) or 404-636-8400 (worldwide)

NOTE: You may register up to 24 hours prior to an online seminar. Course times are in Eastern US Time Zone.

Dates Confirmed for Next Satellite Broadcast/Webcast

The April 22, 2010, ASHRAE Webcast, “**Right From the Start – Commissioning for High Performing Buildings,**” will provide the building community with tools to overcome commissioning hurdles and make the process “business as usual.” This **free** webcast will be transmitted **live** via the internet from 1:00 – 4:00 p.m. EDT.

Webcast participants may earn three (3) Professional Development Hours (PDHs) or (3) AIA Learning Unit and chapters can earn 100 PAOE Points for hosting the program.

The webcast presenters are:

- o **Rick Casault, P.E., CCP, CDT**, President, Casault Engineering, Seattle, WA
- o **H. Jay Enck, CxAP, HBDP, LEED™AP, CPMP**, Founder/Principal/Senior Commissioning Agent, Commissioning & Green Building Solutions, Inc., Buford, GA
- o **Michael L. Weiss, Ph.D. ABD, HCCP**, Managing Principal and President, WorkingBuildings, LLC, Atlanta, GA
- o **Ronald Wilkinson, P.E., LEED™AP**, Senior Commissioning Project Manager, AKF Group, LLC, New York, NY

Online registration via the ASHRAE website will begin March 2, 2010. There is no fee for registration.

Watch for additional information regarding registration and the program and via email, www.ashrae.org, and *ASHRAE Insights*. Please share this information with your colleagues to assist them with scheduling. If you have questions, please contact rdouglas@ashrae.org or call (678) 539-1128.

Making a Case for Energy Efficiency in Existing Buildings: New Industry Publication

ATLANTA – Improving energy use all comes down to green – the green of energy efficiency and resource sustainability as well as the green of money.

So, show them the money. Building owners and managers of existing buildings need to understand the economic benefits of improving systems and operations. A new publication from leading industry organizations provides guidance for the business case to achieve energy savings as much as 30 percent.

Energy Efficiency Guide for Existing Commercial Buildings: The Business Case for Building Owners and Managers provides the rationale for making economic decisions related to improving and sustaining energy efficiency in existing buildings. Approximately 86 percent of

U.S. annual building construction expenditures relate to renovation of existing buildings vs. new construction.

“Our goal is to enable business owners to break down the ‘mystery’ of energy conservation opportunities into business-based scenarios that are both practical and cost-justifiable,” said George Jackins, who chaired the committee overseeing the book. “To achieve true sustainability in the building industry, we must help owners learn that investing in energy efficiency translates into a high rate of return with a low associated risk. Owners and managers typically view buildings in terms of short-term economics. We must make the transition from best value vs. lowest first cost of buildings.”

Specifically, the guide provides straightforward applications that could produce energy savings from 10 to 15 percent to a more aggressive approach that could save 30 percent or more.

The book is a collaboration between ASHRAE, the American Institute of Architects, the Building Owners and Managers Association, the Illuminating Engineering Society of North America, the U.S. General Services Administration and the U.S. Green Building Council.

Here are the five important tips that owners and managers need to know to make their buildings energy efficient:

- Know your current energy utilization index (EUI) (kBtu/SF-year).
- Establish a target EUI and an initial budget estimate for achieving this goal.
- Conduct an internal energy study/audit (using *ASHRAE's Procedures for Commercial Building Energy Audits* as a basis) or have the facility retro-commissioned by a certified retro-commissioning firm. This activity may result in a modification to the original estimated budget amount.
- Identify energy efficiency measures with attractive rates of return on energy retrofit or renovation investments.
- Implement the recommended energy conservation measures that will get the facility to the desired goal with the stipulated budget.

- Commission the energy conservation measures by a certified commissioning firm. This process should include training of facility personnel on properly operating and maintaining equipment and systems.

The book is the first of three planned guides on energy efficiency. The second will be aimed at providing technical guidance in undertaking existing building renovation programs. The third will provide operation and maintenance guidance to help sustain the energy efficiency.

The cost of *Energy Efficiency Guide for Existing Commercial Buildings: The Business Case for Building Owners and Managers* is \$69 (\$59, ASHRAE members). To order, contact ASHRAE Customer Service at 1-800-527-4723 (United States and Canada) or 404-636-8400 (worldwide), fax 404-321-5478, or visit www.ashrae.org/energyguide.

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.

Advanced Energy Design Guidance Offered for Small Hospitals and Healthcare Facilities

ATLANTA—The newest Advanced Energy Design Guide (AEDG), written by a group of leading building industry organizations, is just what the doctor ordered.

The AEDG for Small Hospitals and Healthcare Facilities is the sixth in the 30 percent AEDG series, designed to provide recommendations for achieving 30 percent energy savings over the minimum code requirements of ANSI/ASHRAE/IESNA Standard 90.1-1999.

“The recommendations in the Small Hospitals and Healthcare Facilities Guide provide good design practices for integrating energy efficiency in a healthcare environment, while maintaining indoor air quality and required airflow and pressurization relationships,” Shanti Pless, chair of committee that wrote the guide, said.

The Guide focuses on small healthcare facilities up to 90,000 square feet in size, including acute care facilities, outpatient surgery centers, critical access hospitals and inpatient community hospitals. These buildings have intensive heating and cooling systems, which the guide covers extensively; additionally, other important energy saving measures such as daylighting are included.

“The energy efficiency recommendations in the Guide were developed based on design experiences from members of a project committee made up of healthcare facilities design professionals, combined with the insight gained from modeling the energy performance of these specific recommendations,” Pless said.

Some tips that the Guide offers include:

- Providing an unoccupied air flow and temperature setback for spaces that are not used 24 hours a day, such as surgery suites;
- Installing high efficiency condensing boilers with an outdoor air temperature reset schedule for all climate zones to address the high amounts of reheat energy used by such facilities to control humidity;
- Carefully laying out lighting design to meet recommended lighting power density by space type;
- Maximizing the use of daylighting and daylighting-responsive controls through both sidelighting and toplighting strategies in all space types that do not have air change requirements;
- Installing an insulated thermal envelope, with additional recommendations to address air barriers and continuous insulation strategies.

The recommendations allow contractors, consulting engineers, architects and designers to easily achieve advanced levels of energy savings without having to resort to detailed calculations or analyses.

Also, case studies provide excellent examples of advanced hospital and healthcare facility designs that demonstrate the flexibility offered in achieving advanced energy savings such as the 30 percent goal of the Guide.

The Advanced Energy Design Guide series has been developed in collaboration with these partnering organizations: ASHRAE, the American Institute of Architects (AIA), the Illuminating Engineering Society of North America (IES), the

U.S. Green Building Council (USGBC) and the U.S. Department of Energy (DOE).

Since the Guides first began to be offered as free downloads at the beginning of 2008, more than 200,000 AEDGs have been downloaded. Other books in the series deal with small office and retail buildings, K-12 school buildings, highway lodging and small warehouse and self storage buildings.

For more information on the entire Advanced Energy Design Guide series, or to download a free copy, please visit www.ashrae.org/freeaedg. A softback copy of the Guide may be purchased for \$62 (\$53, ASHRAE members). To order, contact ASHRAE Customer Service at 1-800-527-4723 (United States and Canada) or 404-636-8400 (worldwide), fax 404-321-5478, or visit www.ashrae.org/bookstore.

ASHRAE, IES Seek to Lighten Energy Use through Changes to Standard 90.1

ATLANTA – Requirements to “lighten up” energy use and costs through fenestration, parking lot lighting and other proposed measures are being recommended for Standard 90.1.

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.

Currently, 15 proposed addenda to the standard are open for public review.

“As the industry continues to call for buildings and systems that use less energy, the Standard 90.1 committee is striving to find ways to reduce energy uses and costs,” Mick Schwedler, chair of the Standard 90.1 committee, said. “The proposed changes not only reduce energy use but move the standard closer to the workplan goal of a 2010 standard with 30 percent energy cost savings compared to the 2004 standards.”

Among the proposed addenda out for public comment is addendum *cd*, which would require active exterior control rather than just require the control capability; add bi-level control for general all-night applications, such as parking lots to reduce lighting when not needed; and add control for

façade and landscaping lighting not needed after midnight.

Eric Richman, chair of the standard’s lighting subcommittee, noted that studies from the California Lighting Technology Center at the University of California at Davis found that control strategies reduce lighting energy use by significant amounts during night time hours. A study by Polytechnic State University showed that parking lot lighting operates in a low mode 68 percent of the time.

Additional information from a study by Navigant Consulting shows that parking lots account for 22 Twh out of a total 57 TWh used for outdoor lighting annually nationwide. While this estimate includes all lit parking areas, the potential for energy savings in parking areas that are directly associated with specific building projects are significant and should be supported by the standard.

A second public review of proposed addendum *bn* would reduce solar loads by orienting the fenestration in more appropriate directions. Changed in response to comments during the first public review, this approach gives flexibility to building design teams to work with siting and fenestration and orientation as well as fenestration area to comply with the requirement.

Proposed addendum *bb* updates building envelope requirements for opaque elements, such as walls and rooms, and fenestration (windows and skylights). A number of changes were made in response to public comments during the first public review.

“I would like to thank all of those who met with the Standard 90.1 committee during our fall interim meetings for their candor, input and willingness to work toward an addendum that can reach consensus and save both energy and energy costs,” Schwedler said.

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

National Building Energy Leaders Clarify Stimulus Act Funding

Washington, D.C. – Working in tandem with the U.S. Department of Energy, a group of national building energy organizations – noted for their broad leadership role in national energy efficiency policy – have developed an explanatory statement for state and local governments to clarify the intent of Section 410 of the American Recovery and Reinvestment Act (ARRA) and to offer assistance as states and localities adopt, provide training on and enforce advanced building energy efficiency codes.

The participants, which include ASHRAE, issued the following remarks regarding their statement, which can be found at www.ashrae.org/recovery:

We have joined forces to clarify what Congress intended to be crystal clear when it linked building energy code adoption and enforcement with funding under Section 410 of ARRA. By accepting State Energy Program funding and submitting letters assuring the Department of Energy that their states would comply with the terms of Section 410, all 50 states have committed to do three things:

1. Adopt a residential building energy code that meets or exceeds the 2009 IECC;
2. Adopt a commercial building energy code that meets or exceeds the ANSI/ASHRAE/IESNA Standard 90.1-2007 and;
3. Develop and implement a plan, including active training and enforcement provisions, to achieve 90 percent compliance with the target codes by 2017, including measuring current compliance each year.

“This joint effort is another step in ensuring a strong foundation of energy efficiency in this country,” ASHRAE President Gordon Holness said. “We encourage states to take advantage of the State Energy Program funding and work to ensure a more energy efficient future for our buildings, nationwide.”

Key Deadlines Are Swiftly Approaching. With only a few states having adopted codes that ‘meet or exceed’ the target codes, most states have a long way to go. ARRA requires State plans to be designed to achieve 90 percent compliance with codes by 2017 and to make annual compliance progress assessments. The February 2010

anniversary of ARRA marks the act’s first compliance deadline for states.

To ensure ARRA compliance, it is in each State’s best interest to begin the process of adopting target codes (or better) and to develop the means to train code officials to enforce them as soon as possible, according to the statement.

Help and Funding Are Available for Enforcement and Training. In addition to revenue from building inspection fees, funding for enforcement and training is available from federal grants (including SEP and the Energy Efficiency and Conservation Block Grant (EECBG)) and from existing state and federal energy efficiency funds. In addition, the groups issuing this statement are working closely together to boost new building code-related funding in the pending climate and energy legislation before Congress, according to the statement.

Editors Note: A list of participating organizations follows.

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The undersigned groups are committed to providing support to any requesting state and local government to achieve adoption of the target codes, to develop workable plans for training and enforcement, and to assist them in developing a plan to address the measurement and reporting of annual compliance with the target codes.

Alliance to Save Energy
American Council for an Energy Efficient Economy
The American Institute of Architects
American Society of Heating, Refrigerating and Air-Conditioning Engineers
Building Codes Assistance Project
Building Energy Efficient Codes Network
International Code Council
National Association of State Energy Officials
Natural Resources Defense Council
Northwest Energy Efficiency Alliance
Midwest Energy Efficiency Alliance
Southeast Energy Efficiency Alliance
Southwest Energy Efficiency Project
U.S. Green Building Council

ASHRAE Conference Goes Virtual

ATLANTA—ASHRAE's Winter Conferences provide members and professionals in the HVAC&R industry with technical guidance, networking opportunities and access to the latest technology. For 2010, the Society will continue in this tradition with an additional new twist: The Conference is going virtual.

The Virtual Conference extends access to advances in the HVAC&R industry to professionals across the country and around the world. Participants in the Virtual Conference will be able to interact with speakers and attendees by posting questions and comments, viewing other comments and viewing the presenters' responses through an online discussion board, in addition to ASHRAE's traditional recordings (synced audio and PowerPoint presentations).

"The ASHRAE Winter Virtual Conference offers tremendous opportunities to learn about current practices, case studies and other professional and personal development sessions on a wide-range of hot-topics," Dennis Wessel, Orlando Conference chair, said. "From BIM to ASHRAE standards, attendees can post and view comments on their schedule and refer back to the sessions as needed after the conference ends."

Benefits of the Virtual Conference include:

- Access to over 250 presentations.
- Complete coverage of the technical program with access to seminar presentations, select Transactions sessions, posters and questions and answers from attendees and presenters.
- The ability to post and view comments on presentations.
- Send and receive questions and answers from presenters of selected sessions for a two-week period
- Online access to the presentations for one year.

ASHRAE members may register for the Virtual Conference at www.ashrae.org/orlandovirtual for \$299. Non-members may register for \$464; registration includes one-year ASHRAE membership upon completion of membership application. Companies may also register three or more employees for the

Virtual Conference. Additionally, those already registered to attend the Conference in person will have access to all virtual content for free.

ASHRAE Government Affairs Update

Welcome to ASHRAE's Government Affairs Update. Along with the Government Affairs webpage, these periodic e-mail updates feature information on government affairs related activities of interest to ASHRAE members and others interested in the built environment. Archives of previous updates are available from the government affairs webpage (<http://www.ashrae.org/advocacy>).

Please pass this information on to interested colleagues who also may subscribe from the ASHRAE Government Affairs webpage. Should you wish to unsubscribe, information appears at the end of this e-mail.

If you have any recommendations regarding content, or have questions about or would like to participate in Washington Office activities, please contact ASHRAE Government Affairs staff at (202) 833-1830 or washdc@ashrae.org.

ASHRAE Government Affairs Update, 11/20/09

- [ACEEE: California Leads the Country in Energy Efficiency Policies](#)
- [Nearly \\$40 Million for Energy Efficiency and Conservation Projects in Florida and Maine](#)
- [More Than \\$104 Million for National Laboratory Facilities](#)
- [United States and China to Cooperate on Clean Energy](#)
- [AIA Report Notes Surge in Green Building Programs](#)

ACEEE: California Leads the Country in Energy Efficiency Policies

California topped the 2009 State Energy Efficiency Scorecard, recently released by American Council for an Energy-Efficient Economy (ACEEE). The third annual edition of the report from the nonprofit ranks states in six energy efficiency categories:

utility-sector and public benefits programs and policies; transportation polices; building energy codes; combined heat and power; state government initiatives; and appliance efficiency standards. In the new scorecard, Massachusetts and Connecticut land in second and third place, respectively, while the states at the bottom of the list include Mississippi, North Dakota, and Wyoming.

The report lauds the states of Colorado, Delaware, Maine, South Dakota, and Tennessee for greatly improving their ranking in 2009. According to the ACEEE, a variety of efforts boosted the rankings of those states, including the adoption of new building energy codes and the setting of new energy savings targets. For instance, Maine moved up 9 spots to number 10 through the increased efforts of Efficiency Maine (the agency that delivers the state's energy efficiency programs), the adoption of building energy codes, land-use planning management, and other activities. The report also notes a growing trend toward Energy Efficiency Resource Standards (EERS), which set binding energy savings goals for utilities. In late 2008 and in the first half of 2009, Delaware, Michigan, Ohio, and Pennsylvania passed laws establishing EERS targets. See the ACEEE press release (<http://www.aceee.org/press/e097pr.htm>) and the 2009 State Energy Efficiency Scorecard (<http://www.aceee.org/pubs/e097.htm>).

Nearly \$40 Million for Energy Efficiency and Conservation Projects in Florida and Maine

Energy Secretary Steven Chu announced that the U.S. Department of Energy (DOE) is awarding nearly \$40 million in funding from the American Recovery and Reinvestment Act to Florida and Maine to support clean energy projects. Under DOE's Energy Efficiency and Conservation Block Grant (EECBG) program, these states will implement programs that lower energy use, reduce carbon pollution, and create green jobs locally.

The awards to the State Energy Offices will be used to support state-level energy efficiency priorities, along with funding local conservation projects in smaller cities and counties. At least 60% of each state's award will be passed through to local cities

and counties not eligible for direct EECBG awards from the Department of Energy. The EECBG Program was funded for the first time by the Recovery Act and provides formula grants to states, cities, counties, territories and federally-recognized Indian tribes nationwide to implement energy efficiency projects locally.

Projects eligible for support include the development of an energy efficiency and conservation strategy, energy efficiency audits and retrofits, transportation programs, the creation of financial incentive programs for energy efficiency improvements, the development and implementation of advanced building codes and inspections, and the installation of renewable energy technologies on municipal buildings.

For a full list of awards to date, visit the Energy Efficiency and Conservation Block Grant Program Web site (<http://www.eecbg.energy.gov/>).

More Than \$104 Million for National Laboratory Facilities

Deputy Secretary of Energy Daniel Poneman announced \$104.7 million in funding from the American Recovery and Reinvestment Act for eight new projects to establish critical research and testing facilities at seven U.S. Department of Energy (DOE) national laboratories. The projects will support the development and improvement of clean energy and efficiency technologies of strategic national interest. Specifically, the funding will go toward reducing the production cost of carbon fiber manufacturing, to help in reducing the weight of vehicles; improved efficiency and lower costs for car batteries; and net-zero energy building technologies. This effort will leverage the combined intellectual and technical resources of DOE national laboratories to support technologies that will help transform the economy and create jobs, while decreasing carbon emissions.

United States and China to Cooperate on Clean Energy

President Barack Obama and China's President Hu Jintao announced on November 17 a far-reaching

package of measures to strengthen cooperation between the United States and China on clean and renewable energy. The presidents began by establishing a U.S.-China Clean Energy Research Center to facilitate joint research and development of clean energy technologies by scientists from both countries. The center will be supported by \$150 million in public and private funds over the next five years, split evenly between the partners. Initial research priorities will be building energy efficiency, clean vehicles, and carbon capture and storage.

Also, building on the first-ever U.S.-China Electric Vehicle Forum in September 2009, the two leaders unveiled a U.S.-China Electric Vehicles Initiative, which will include developing joint standards, building demonstration projects in more than a dozen cities, creating technical roadmaps, and carrying out public education projects. Both nations said they share an interest in accelerating the deployment of electric vehicles in order to reduce oil dependence, cut greenhouse gas emissions, and promote economic growth. The countries will also leverage private sector resources to develop clean energy projects in China through the U.S.-China Energy Cooperation Program (ECP). More than 22 companies are founding members of the program. The ECP will include collaborative projects involving renewable energy, smart grids, clean transportation, green buildings, combined heat and power, energy efficiency, and clean coal.

As part of their joint efforts, the two powers will hold an ongoing series of forums. For example, a new U.S.-China Energy Efficiency Forum will be held annually, rotating between the two countries. This will be part of the new U.S.-China Energy Efficiency Action Plan, launched by President Obama and President Hu Jintao. The action plan commits the two countries to work together and with the private sector to improve the energy efficiency of buildings, industrial facilities, and consumer appliances. Similarly, the new U.S.-China Renewable Energy Partnership will feature an annual rotating forum. Under the partnership, the two countries will develop roadmaps for widespread renewable energy deployment in both countries. In

addition, the countries will encourage state-to-state and region-to-region partnerships in order to share experiences and best practices. Also included in this undertaking will be a new Advanced Grid Working Group, which will bring together U.S. and Chinese policymakers, regulators, industry leaders, and civil society to develop strategies for grid modernization in both countries. See the DOE press release (<http://www.energy.gov/news2009/8292.htm>) and the DOE fact sheets on the Clean Energy Research Center

(http://www.energy.gov/news2009/documents2009/U.S.-China_Fact_Sheet_CERC.pdf), Energy Efficiency Plan (http://www.energy.gov/news2009/documents2009/US-China_Fact_Sheet_Efficiency_Action_Plan.pdf), and Renewable Energy Partnership (http://www.energy.gov/news2009/documents2009/US-China_Fact_Sheet_Renewable_Energy.pdf).

AIA Report Notes Surge in Green Building Programs

The number of U.S. cities with green building programs has increased 50% in two years, according to a survey by the American Institute of Architects (AIA). Green buildings generally include energy-efficient designs and other sustainable features. Among the findings from AIA, 138 cities have green building programs, compared with 92 cities in 2007, and 24 of the 25 most populated metropolitan regions are built around cities with a green building policy. The new report, "Green Building Policy in a Changing Economic Environment," is an inventory of policies and best practices intended to help policymakers advance a more sustainable legislative agenda for growth and development. The report also notes that DOE's Energy Efficiency and Conservation Block Grant program, funded by the American Recovery and Reinvestment Act, is providing "an unprecedented opportunity for the advancement of green building and sustainability efforts in our nation's cities." See the report (<http://www.aia.org/advocacy/local/AIAB081637?dvid=&recspec=AIAB081637>).

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tman.ashrae.org

ASHRAE Washington Office
1828 L Street, NW * Suite 906 * Washington, DC
20036
(202) 833-1830 * fax: (202) 833-0118 *
washdc@ashrae.org
<http://www.ashrae.org/advocacy>

Jason Danyliw
Vice President & Newsletter

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ASHRAE Inside

Building Sustainability from the Inside Out



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2010 Winter Conference

January 23-27

Orlando, Florida

Full-Day Professional Development Seminars

Registration fees:

\$485

\$395 for ASHRAE members

Each course earns 6 PDHs/AIA LUs or .6 CEUs

Saturday, January 23

Complying with ASHRAE Standard 62.1-2007

8 a.m. – 3 p.m.

Instructor: Hoy Bohanon, P.E. (Working Buildings)

Energy Management in New and Existing Buildings: A Sustainable Activity



8 a.m. – 3 p.m.

Instructors: Richard Pearson, P.E. (Pearson Engineering, LLC) and Kevin Little, Ph.D. (Informing Ecological Design, LLC)

Complying with ANSI/ASHRAE/IESNA Standard 90.1-2007

8 a.m. – 3 p.m.

Instructors: McHenry Wallace, P.E., (TXU Energy) and Joseph Deringer, AIA, LEED-AP (Institute for Sustainable Building Performance)

Data Center Energy Efficiency

8 a.m. – 3 p.m.

Instructors: Roger Schmidt, Ph.D., P.E. (IBM), Don Beaty, P.E. (DLB Associates) and Jack Glass, P.E. (Citigroup)

The Commissioning Process in New & Existing Buildings

8 a.m. – 3 p.m.

Instructor: Richard Casault, P.E., CCP (Casault Engineering)

Half-Day Short Courses

Registration fees:

\$159

\$119 for ASHRAE members

Each course earns 3 PDHs/AIA LUs or .3 CEUs

Sunday, January 24

The Basics of Panel Heating & Cooling

2:00 p.m. – 5:00 p.m.

Instructors: Birol Kilkis, Ph.D. (Baskent University) and Robert Bean, R.E.T.

Using Standard 90.1 to Meet LEED Requirements

2:00 p.m. – 5:00 p.m.

Instructors: McHenry Wallace, P.E., (TXU Energy) and Joseph Deringer, AIA, LEED-AP (Institute for Sustainable Building Performance)

Engineering for Sustainability: Understanding Air-to-Air Energy Recovery Technologies and

Applications 

2:00 p.m. – 5:00 p.m.

Instructors: Instructor: Paul Pieper, P.Eng, (Venmar CES Inc.)

Chilled Beam Technology for Excellent Indoor Climate in an Energy Efficient Manner 

(Co-sponsored by REVHA)

2:00 p.m. – 5:00 p.m.

Instructor: Maija Virta, M.Sc-Eng (Halto Oy)

Monday, January 25

Successful Solar Applications

2:30 p.m. – 5:30 p.m.

Instructor: Henry Healey, P.E. (Healey & Associates)

District Cooling & Heating Systems: Central Plants 

(Co-sponsored by ASHRAE, BCA, IESNA, and NEBB)

2:30 p.m. - 5:30 p.m.

Instructors: Donald Bahnfleth (Bahnfleth Group Advisors, LLC) and William Bahnfleth, Ph.D., P.E. (Penn State)

Grooved Mechanical Piping System Technology and Design 

2:30 p.m. – 5:30 p.m.

Instructor: John Rutt (Victaulic Company, Inc.)

Introduction to BACnet

2:30 p.m. – 5:30 p.m.

Instructor: David Fisher (Polarsoft, Inc.)

The Basics of a Proposed Standard on High Performance Green Buildings (Standard 189.1)

2:30 p.m. – 5:30 p.m.

Instructor: Tom Lawrence, Ph.D., P.E., LEED-AP (University of Georgia)

Tuesday, January 26

Healthcare Facilities: Best Practice HVAC Design, Construction & Criteria

8:00 a.m. – 12:00 p.m.

Instructors: Robert Cox, P.E. (Carter & Burgess), Daniel Koenigshofer, P.E. (IES Engineers) and Michael Sheerin, P.E. (TLC Engineering for Architecture)

Determining Energy Savings from Energy Efficiency Projects: Applying IPMVP and Guideline 14 to Performance Contracting and LEED

9:00 a.m. – 12:00 p.m.

Instructor: Mark Stetz, P.E. (Stetz Consulting, LLC)

The Commissioning Process & Guideline 0

(Co-sponsored by BCA, IESNA and NEBB)

9:00 a.m. - 12:00 p.m.

Instructor: Walter Grondzik, P.E. (Ball State University)

Introduction to Cleanrooms



9:00 a.m. - 12:00 p.m.

Instructor: R. Vijayakumar (Aerfil, LLC)

Healthcare Facilities: Best Practice Applications of HVAC Systems

1:00 p.m. – 5:00 p.m.

Instructors: Robert Cox, P.E. (Carter & Burgess), Daniel Koenigshofer, P.E. (IES Engineers) and Michael Sheerin, P.E. (TLC Engineering for Architecture)

Understanding & Designing Dedicated Outside Air Systems (DOAS)

2:00 p.m. – 5:00 p.m.

Instructor: Stanley Mumma, Ph.D., P.E. (Penn State University)

Designing Toward Net Zero Energy Commercial Buildings



2:00 p.m. - 5:00 p.m.

Instructors: Dunstan Macauley, P.E. (Encon Group, Inc.) and Frank Mills, P. Eng. (Environmental Design Consultants Limited)

IAQ & Productivity: How to Maximize Investments in Indoor Climate



(Co-sponsored by REHVA)

2:00 p.m. - 5:00 p.m.

Instructor: Pawel Wargocki (Technical University of Denmark)