

Pile of Bones

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JANUARY 2010

President's Message

by Greg Fluter

Happy New Year!

I hope everyone had an enjoyable Holiday Season and was able to take some well deserved time off. If you're like me, it's time to get back to the gym to burn off those extra calories consumed!

Last month's meeting was our Christmas Social which was held at the UofR Owl. It was an enjoyable evening of food, socializing, magic and mentalism. The featured act, Jack Skrip, had a few tricks that he performed throughout the night. I think he was able to 'wow' the audience with a few of them. On the down side, we were a few people short of what we were hoping for and needed to break even for the event. As a result, the Chapter reserve fund will have to be dipped into cover the extra cost. Thank you to Trevor Hobman for organizing the event.

This month we are please to have ASHRAE Society President, Gordon Holness, with us. **PLEASE NOTE THE MEETING DATE HAS**

BEEN MOVED TO TUESDAY, JANUARY 12th (instead of our usual Wednesday time) to accommodate Gordon's schedule. Gordon will be discussing his presidential theme: 'Sustaining Our Future by Rebuilding Our Past' which addresses energy efficiency in existing buildings. Please try to attend to meet and listen to Gordon and also to show him the strenght of our Chapter.

For February's meeting (which will be on our reguarly scheduled date) we are doing something a little different. George Reed (yes...that's George Reed) will be with us to give a talk. Please mark it on your calender to attend. Heric will provide more information.

Finally, remember that CRC (Chapters Regional Conference) is fast approaching in May and we are hosting the conference. Jerry Boulanger has been busy planning for a while now and has his committee in place. He's looking for more volunteers to help out so please contact Jerry directly, or any of the Chapter's Board of Governors, for more information. Hope to see you on Tuesday!

Meeting Notice! Presidential Visit!

**Tuesday
January 12, 2010**

**Hotel Saskatchewan
Radisson Plaza
2125 Victoria Avenue
Regina, Sk.**

5:00 -Social/Cocktails

**5:30 – Gordon Holness, P.E.,
Fellow ASHRAE, Life
Member, Society President
will present on "Sustaining
Our Future by Rebuilding
Our Past, Energy Efficiency
in Existing Buildings"**

6:30 - Dinner

7:15 - Chapter Meeting

Please note: Please remit your payment as soon as possible for Chapter dues 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.

Anyone not having received their invoice, please contact via email:

ashraeregina@accesscomm.ca

Technical Program for January

For our January Meeting, we will have a Presidential visit from Gord Holness, PE Fellow ASHRAE.

President Gord Holness will be presenting on “Sustaining Our Future by Rebuilding Our Past”, Energy Efficiency in Existing Buildings.

As ASHRAE’s president, Holness directs the Society’s Board of Directors and oversees the Executive Committee. His presidential theme, “*Sustaining Our Future by Rebuilding Our Past*”, addresses energy efficiency in existing buildings.

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, President Gord Holness

February 10, 2010: George Reed

March 8, 2010: Variable Refrigerant Flow Systems - Julian de Bullet DL

April 14, 2010: Student night

May 12, 2010: Shawn Wedewer - SRC presentation - Commercial Cogeneration

June, 2010: ASHRAE Research golf tournament

Committee Chair Reports

President Elect and Chapter Technology Transfer Chair

by Heric Holmes

I am looking forward to this month’s presidential visit with Gord Holness. It is a rare opportunity to have a presidential visit and his theme is timely as our building infrastructure continues to age.

Next month’s meeting will be with former Saskatchewan Roughrider George Reed on our regular date. I will relay more information about the topic as we get closer to the date.

There is currently one meeting that presentations are not yet confirmed. We are still looking for some other local presentations for 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

I hope the Holiday Season was a good one for you and your Family.

ASHRAE is preparing for the Winter Meetings in Orlando, Florida. The ASHRAE Winter Conference runs January 23 – 27, 2010, and the AHR Expo takes place January 25 – 27. For more information on the Conference, please visit

www.ashrae.org/orlando. The Technical Program theme is “Building Sustainability from the inside out”. I have attached the link to the complete list of Technical Sessions programs:

<http://conferenceprogram.ashrae.biz/orlando2010/>

At this point in the ASHRAE year, our chapter has had 2 new membership applications. I know of a couple of people that have expressed interest and I will follow up with them in the next couple of weeks.

Our chapter is very fortunate that Society President Gordon Holness is making chapter visits to Region XI this year, and will be our program speaker on Tuesday. As well as our chapter, Gordon will be visiting Saskatoon, B.C. Chapter (Vancouver) as well as the Vancouver Island Chapter. I would like to thank Norm Grusnick and Jeanie Kirksey for all their assistance in organizing this trip.

I hope to see you on Tuesday.

Rob Craddock
Membership Promotion Chair

Past President & Research Promotion Chair

by Ted Cooke

Happy New Year! A big thank you to all of the ASHRAE Regina Chapter Board of Governors and Chapter members for donating to ASHRAE Research thus far. More details on donations will follow in next month's newsletter.

Ted Cooke
Past President & Research Promotion Chair

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

I hope you and yours enjoyed a great Holiday Season!

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.

Health Care Facility Ventilation Standard Incorporated into FGI Guidelines

ATLANTA – As a move toward a single consensus-based standard of care, a ventilation standard from ASHRAE and ASHE has been incorporated into the *Guidelines for Design and Construction of Health Care Facilities*, copyrighted by the Facility Guidelines Institute and published by the American Society for Healthcare Engineering (ASHE).

ANSI/ASHRAE/ASHE Standard 170-2008, *Ventilation of Health Care Facilities*, defines ventilation system design requirements that provide environmental control for comfort, as well as infection and odor control.

The inclusion of Standard 170 in the 2010 edition of the Guidelines replaces much of the ventilation material previously included in the Guidelines. This merger is intended to eliminate potential confusion by having two national ventilation standards for health care. The Guidelines are used by more than 42 states and several federal agencies to regulate health care facility design and construction around the United States, meaning that in some states Standard 170 is likely to be adopted into code as part of the Guidelines.

“Congratulations to FGI and ASHE for their successful publication of the 2010 Edition of the *FGI Guidelines for Design and Construction of Health Care Facilities*,” Rick Hermans, chair of the Standard 170 committee, said. “Standard 170 was developed and continues to evolve with the direct participation of members of the Health Guidelines Revision Committee, who are supported by FGI. Their efforts, along with the efforts of our partner ASHE, make the family of documents that offers guidance, regulation and mandates to designers of health care facilities closer than ever to the goal of a single consensus-based minimum standard of care. The marriage of the FGI Guidelines and Standard 170 is a testament to the cooperation of all parties over the last four years to bring this excellent document to publication.”

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.

Call for Papers Announced

IAQ 2010 Examines Impact of HVAC on Airborne Infectious Disease

ATLANTA –The role of HVA&R in airborne infectious disease transmission, design and control strategies and technology, pandemic preparedness and airborne infection control will be examined at the IAQ 2010 conference sponsored by ASHRAE.

Co-organized by CIBSE and ISIAQ, *IAQ 2010: Airborne Infection Control – Ventilation, IAQ & Energy*, takes place Nov. 10-12, 2010, in Kuala Lumpur, Malaysia. This is the first time the conference is being held outside of the United States.

“The building industry is increasingly faced with the challenge of providing a healthy indoor environment,” Dr. Chandra Sekhar, conference chair, said. “The SARS episode, the current H1N1 pandemic and fears of avian flu have transformed the built environment landscape, raising not only significant public health concerns but also economic implications on a global scale. Airborne infection and its control in the built environment have tremendous impact in the design, operation and maintenance of buildings and other enclosed environments. IAQ 2010 will review the state of knowledge about airborne infection and help define future directions.”

The conference will feature peer-reviewed technical papers, workshops and tutorials. Abstracts are invited in the following subject areas:

- Is airborne infection in enclosed environments emerging as a primary IAQ and health concern?
- What is our current understanding of the airborne infection route in enclosed environments, including buildings and transportation conveyances?
- What is the status of airborne infection control techniques adopted in different types of enclosed environments and our knowledge about their effectiveness?
- How do mechanical systems and other building and enclosure characteristics contribute to healthy environments in an energy-efficient manner?
- How can we create and sustain healthy enclosed environments through design, construction, commissioning, operation and maintenance?
- What metrics and tools can be used to quantify the degree to which an enclosed environment is healthy and energy-efficient?

- What are the costs and quantifiable benefits of airborne infection control strategies?
- What government and private sector programs exist or are proposed, including standards and guidelines for infection control and pandemic-preparedness in enclosed environments?
- How well are the existing programs working and what roles can ASHRAE and other organizations in the field of building science and conveyance design play?

The deadline for abstracts is Jan. 15, 2010. Abstracts, containing titles and maximum 400-word summaries, should be submitted at www.ASHRAE.org/IAQ2010. For more information, email IAQ2010@ashrae.org or visit www.ASHRAE.org/IAQ2010.

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, 12/18/09

- [President Obama Proposes Home Energy Retrofit Program for Job Creation](#)
- [Commerce Department to Speed Review of Green Technology Patents](#)

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- [DOE Launches Public Web Site for Energy Technology Information](#)

President Obama Proposes Home Energy Retrofit Program for Job Creation

President Barack Obama proposed a new rebate program to reward homeowners for making their homes more energy efficient, while also proposing additional federal investments in energy efficiency and renewable energy. As part of a speech about jobs and the economy, the president noted that home energy retrofits create jobs, save money for families, and reduce the pollution that threatens our environment. President Obama also called for aid to small businesses and new investments in infrastructure. Most of the president's proposals will require congressional approval.

President Obama's job plan calls for an expansion of select American Recovery and Reinvestment Act initiatives that promote energy efficiency and clean energy jobs. The president noted that one-third of the Recovery Act is intended for investments "to put Americans to work doing the work that America needs done," such as doubling the U.S. capacity for producing power from renewable energy. But most of those initiatives are oversubscribed, causing many strong ideas to go unfunded. With that in mind, the Obama Administration is supporting the expansion of programs for which additional federal dollars will leverage private investment and create

jobs quickly, such as investments in industrial energy efficiency, as well as new or extended tax incentives for investing in U.S. manufacturing facilities for renewable energy technologies. See the White House press release (<http://www.whitehouse.gov/the-press-office/president-obama-announces-proposals-accelerate-job-growth-and-lay-foundation-robust>) and a transcript of the president's remarks (<http://www.whitehouse.gov/the-press-office/remarks-president-job-creation-and-economic-growth>).

Commerce Department to Speed Review of Green Technology Patents

The U.S. Commerce Department announced that its U.S. Patent and Trademark Office (USPTO) will pilot a year-long program to accelerate the examination of certain "green" technology patent applications by as much as one year. The new initiative is designed to speed the development and deployment of green technology, create green jobs, and promote U.S. competitiveness. In particular, the program focuses on patents for renewable energy and energy efficiency technologies, plus other environmental technologies. The program rules spell out 29 categories of renewable energy technologies and 23 categories of energy efficiency technologies that are eligible. Pending patent applications in these technologies will be eligible for special status and given expedited review. Earlier patenting of these technologies enables inventors to secure funding, create businesses, and bring vital green technologies into use much sooner.

Patent applications are normally taken up for examination in the order that they are filed. It typically takes the USPTO two and a half years to start taking action on a patent application, and it takes another 10 months to reach a final decision on the patent. Under the pilot program, the office will examine patent applications on an accelerated basis for the first 3,000 applications related to green technologies for which a petition is filed. Petitions are currently being accepted, and the program will accept petitions through December 8, 2010. If the trial is successful, the USPTO will consider ways to expand the initiative. See the Commerce

Department press release (http://www.commerce.gov/NewsRoom/PressReleases/FactSheets/PROD01_008680); the USPTO Web site (<http://www.uspto.gov/>); the full details on the pilot program as published in the Federal Register (<http://www.uspto.gov/patents/law/notices/74fr64666.pdf>); and the petition form for the pilot program (<http://www.uspto.gov/forms/sb0420.pdf>).

EIA: U.S. Greenhouse Gas Emissions Decreased by 2.2% in 2008

The total U.S. emissions of greenhouse gases dropped to the equivalent of 7,053 million metric tons of carbon dioxide in 2008, a 2.2% decrease, according to a new report from DOE's Energy Information Administration (EIA). The drop was largely due to a 2.9% decrease in energy-related carbon dioxide emissions, which the EIA attributes to record-high oil prices for much of the year, followed by a decline in economic activity. That decline is expected to continue this year, as the EIA's "Short Term Energy Outlook," released on December 8, projects a 6.1% decrease in energy-related carbon dioxide emissions, which are the largest source of greenhouse gas emissions in the United States. But a healthier economy tends to bring increases in such emissions, and the EIA projects a 1.5% increase in energy-related carbon dioxide emissions in 2010. Since 1990, U.S. greenhouse gas emissions have grown at an average annual rate of 0.7%. See the EIA press release (<http://www.eia.doe.gov/ncic/press/press333.html>), the greenhouse gas report (<http://www.eia.doe.gov/oiaf/1605/ggrpt/index.html>), and the "Short-Term Energy Outlook" (<http://www.eia.doe.gov/emeu/steo/pub/contents.html>).

EPA Declares Greenhouse Gases Threaten Health

U.S. Environmental Protection Agency (EPA) has officially declared that greenhouse gases threaten the public health and welfare of the residents of the United States, which means that they fit within the Clean Air Act's definition of air pollutants and are subject to regulation. The so-called endangerment

finding covers six key greenhouse gases: carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. The finding does not in and of itself impose any emissions requirements, but it does allow the EPA to finalize its proposed greenhouse gas standards for light-duty vehicles. Although it opens the six greenhouse gases to regulation under the Clean Air Act, the Obama Administration prefers a legislative solution to the problem of climate change. See the EPA press release (<http://yosemite.epa.gov/opa/admpress.nsf/0/08D11A451131BCA585257685005BF252>) and the endangerment finding (<http://www.epa.gov/climatechange/endangerment.html>).

The EIA reports and the EPA endangerment finding also come as international negotiations on a climate change pact are underway in Copenhagen, Denmark. The United Nations (U.N.) climate change conference, technically known as the 15th Conference of the Parties (COP) to the U.N. Framework Convention on Climate Change, or COP 15 for short, runs through December 18. The president's arrival near the end of the negotiations allows him to potentially play a role in achieving an international agreement. See the White House press release (<http://www.whitehouse.gov/the-press-office/statement-press-secretary-united-nations-climate-change-conference>), the official U.N. COP-15 Web site (<http://en.cop15.dk/>), and the official U.S. COP-15 Web site (<http://cop15.state.gov/>).

Maine Requires Default Green Power Offer

Governor Baldacci of Maine signed into law a bill requiring the Maine Public Utilities Commission (PUC) to develop a default green power option for all residential and small commercial electricity consumers. The PUC is directed to include community-based renewable energy to the maximum extent possible. Community-based energy includes generation facilities that are at least 51% owned by an individual, a political subdivision, a State entity, a federally recognized Indian tribe located in Maine, a nonprofit corporation, or a business corporation which has at least 51% ownership by one or more residents of

Maine. The PUC is charged with adopting rules to implement the requirement.

For additional information see http://www.mainelegislature.org/legis/bills/bills_124th/chapters/PUBLIC329.asp.

NY Approves Property Assessments for Solar and Energy Efficiency

The New York legislature passed a law authorizing municipal loan programs for renewable and energy efficiency improvements to homes and businesses. The measure allows municipalities to use Property Assessed Clean Energy (PACE) financing. Under PACE, cities or counties set up special clean energy finance districts capable of issuing low-interest bonds to participants. The bonds are used to cover the costs of renewable energy and efficiency improvements on private property, and participants pay the loans back through a 20-year assessment on their property taxes.

PACE programs are entirely voluntary. There are no requirements for municipalities to set them up for homeowners to take out loans from the programs. They are now allowed by state law in California, Colorado, Florida, Louisiana, Maryland, Nevada, New Mexico, New York, Ohio, Oklahoma, Oregon, Texas, Vermont, Virginia, and Wisconsin

Recently, DOE announced \$454 million in Recovery Act funds to help set up programs such as PACE. For more information, read the New York governor's press release (http://www.ny.gov/governor/press/press_1116091.html), and the DOE Energy Efficiency and Conservation Block Grant Program application (http://www.eecbg.energy.gov/about/competitive_grants.html).

Existing Energy Efficiency Technologies Could Provide Major Savings

Energy efficiency technologies that exist today or that are likely to be developed in the near future could save considerable money as well as energy, says a new report from the National Research Council. Fully adopting these technologies could

lower projected U.S. energy use 17 percent to 20 percent by 2020, and 25 percent to 31 percent by 2030.

Achieving full deployment of these efficiency technologies will depend in part on pressures driving adoption, such as high energy prices or public policies designed to increase energy efficiency. The energy savings from attaining full deployment of cost-effective, energy-efficient technologies in buildings alone could eliminate the need to add new electricity generation capacity through 2030, the report says. New power generation facilities would be needed only to address imbalances in regional energy supplies, replace obsolete facilities, or to introduce more environmentally friendly sources of electricity.

Many cost-effective efficiency investments in buildings are possible, the report says. For example, replacing appliances such as air conditioners, refrigerators, freezers, furnaces, and hot water heaters with more efficient models could reduce energy use by 30 percent. Opportunities for achieving substantial energy savings exist in the industrial and transportation sectors as well. For example, deployment of industrial energy efficiency technologies could reduce energy use in manufacturing 14 percent to 22 percent by 2020, relative to expected trends. Most of these savings would occur in the most energy-intensive industries, such as chemical manufacturing, petroleum refining, pulp and paper, iron and steel, and cement.

Although there is great potential, many barriers exist to widespread adoption of energy efficiency technologies, the report points out. The upfront costs can be high, which can deter investment despite the possibility of long-term cost savings. Volatile energy prices can cause buyers to delay purchasing more efficient technology due to a lack of confidence that they will see an adequate return on their investment. In addition, there is a shortage of readily available, trustworthy information for consumers hoping to learn about the relative performance and costs of energy-efficient technology alternatives. Investments in energy-efficient infrastructure are particularly important, as these can lock in patterns of energy use for

decades. Therefore, taking advantage of windows of opportunity for infrastructure is crucial.

Overcoming these barriers will require significant public and private support, and sustained effort. Many energy efficiency initiatives have been successful, such as the U.S. Department of Energy and U.S. Environmental Protection Agency's Energy Star labeling program. Efforts undertaken by California and New York have yielded large energy savings for those states. These experiences provide valuable lessons for national, state, and local policymakers on enacting effective energy efficiency policies.

Copies of Real Prospects for Energy Efficiency in the United States are available from the National Academies Press
(http://www.nap.edu/catalog.php?record_id=12621)

EPA Signs Two Rules Addressing HCFCs and the Ozone Layer

The U.S. Environmental Protection Agency has announced two final rules that will further cut ozone-depleting pollutants, protecting the Earth's ozone layer and reducing harmful greenhouse gases. The rules reduce the availability and use of hydrochlorofluorocarbons (HCFCs).

The first rule prohibits the use of specific HCFCs to manufacture new air-conditioning and refrigeration equipment beginning in 2010, while allowing limited HCFC use to service existing equipment. The second rule prohibits the sale, distribution, and import of air-conditioning and refrigeration appliances and their components containing certain HCFCs that are manufactured or imported after January 1, 2010.

More information on the two rules:
<http://www.epa.gov/ozone/title6/phaseout/rulesoverview.html>

New Category of Geothermal Heat Pumps Can Earn Energy Star

The U.S. Environmental Protection Agency is announcing new requirements for residential geothermal heat pumps (GHPs), enabling water-to-water geothermal heat pumps to earn the Energy Star label for the first time. EPA's stringent specifications for this new category of geothermal heat pumps will help protect the environment and reduce energy costs, because GHPs that meet the new standards will be up to 45 percent more efficient than conventional pumps.

EPA worked with industry stakeholders to revise the requirements in response to growing consumer demand for water-to-water geothermal heat pumps. The new requirements for water-to-water equipment complements existing efficiency and performance requirements for water-to-air and direct geothermal GHP models. Homeowners who install geothermal heat pumps with the Energy Star are eligible for a 30 percent federal tax credit.

More information on the heat pumps see <http://www.energystar.gov/ghp>. For more information on the tax credit see <http://www.energystar.gov/taxcredits>.

NIST Offers Funds for Research

The National Institute of Standards and Technology (NIST) announces that the following programs are soliciting applications for financial assistance for FY 2010: (1) The Electronics and Electrical Engineering Laboratory Grants Program; (2) the Manufacturing Engineering Laboratory Grants Program; (3) the Chemical Science and Technology Laboratory Grants Program; (4) the Physics Laboratory Grants Program; (5) the Materials Science and Engineering Laboratory Grants Program; (6) the Building Research Grants and Cooperative Agreements Program; (7) the Fire Research Grants Program; (8) the Information Technology Laboratory Grants Program; (9) the NIST Center for Neutron Research Grants Program; (10) Center for Nanoscale Science and Technology Grants Program; and (11) the Technology Services Grants Program.

Each program will only consider applications that are within the scientific scope of the program as

described in this notice and in the detailed program descriptions found in the Federal Funding Opportunity (FFO) announcement for these programs. Prior to preparation of a proposal, it is strongly suggested that potential applicants contact the Program Manager for the appropriate field of research, as specified in the FFO announcement found at <http://www.grants.gov>, for clarification of the program objectives and to determine whether their proposal is responsive to this notice.

For more details, see the Federal Register notice at <http://edocket.access.gpo.gov/2009/pdf/E9-29825.pdf>.

California Releases Preliminary Rules for GHG Cap-and-Trade Program

The California Air Resources Board (ARB) released a preliminary draft version of California's greenhouse gas (GHG) cap-and-trade regulation. As proposed, the cap-and-trade regulations will take effect in 2012 and will apply to 605 of the state's largest stationary emitters of GHGs, including industries and power plants, along with electricity imports. Starting in 2015, the regulations will also apply to fuel suppliers, to help address emissions from vehicles and from smaller stationary emitters of GHGs, such as homes and commercial businesses. The regulations will set a cap on GHGs emissions that will decline each year through 2020, in order to help bring the state's GHG emissions back to 1990 levels, which represents a decline of about 15% from today's emission levels. The cap-and-trade program is just one part of achieving this goal; other measures include building and appliance efficiency standards, strong energy efficiency programs, a statewide renewable energy requirement, clean car standards, a low-carbon fuel standard, and targeted usage fees. The goal was set by the state's Global Warming Solutions Act, which was signed by Governor Schwarzenegger in 2006.

Under the proposed cap-and-trade program, covered entities will receive a declining number of tradable emissions credits, a portion of which will be available through an auction. A trading system will allow entities with higher emissions to buy credits from entities that have reduced their emissions. This

effectively sets a market-based price on GHG emissions, which encourages companies to invest in ways to reduce their emissions. However, the program is not prescriptive; it allows each company to find the most cost-effective means of cutting emissions, while allowing companies that lack cost-effective approaches to buy emission credits. The proposed program includes the limited use of offsets, which allow companies to invest in other ways to reduce GHG emissions. When fully in place, the program would cover 85% of California's GHG emissions. For flexibility, the trading program is intended to be linked to the Western Climate Initiative, which includes a large portion of Canada and the western United States. See the ARB press release

(<http://www.arb.ca.gov/newsrel/nr112409b.htm>), the draft cap-and-trade regulation (<http://www.arb.ca.gov/cc/capandtrade/meetings/121409/pdr.pdf>), and for background, the scoping plan for achieving the state's GHG goal (http://www.arb.ca.gov/cc/scopingplan/document/adopted_scoping_plan.pdf).

DOE Launches Public Web Site for Energy Technology Information

DOE has unveiled Open Energy Information, an open-source Web platform that will make DOE resources and energy data widely available to the public. The data and tools housed on the free, editable, and evolving wiki platform will help deploy clean energy technologies across the country and around the world. The site currently houses more than 60 clean energy resources and data sets, including maps of worldwide solar and wind potential, information on climate zones, and best practices. OpenEI.org also links to the Virtual Information Bridge to Energy (VIBE), which serves up Web gadgets that display energy data. See the DOE press release

(<http://www.energy.gov/news2009/8381.htm>), the OpenEI.org Web site (http://en.openei.org/wiki/Main_Page), and the VIBE Web site (<http://vibe.nrel.gov/>).

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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.

Instructor: 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)