

THE HOT AIR DIFFUSER IDAHO CHAPTER NEWSLETTER

DECEMBER 2009

VOLUME 16 ISSUE 4



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PRESIDENT'S MESSAGE

*TO ARRIVE IN A SEPARATE
E-MAIL.*



DECEMBER PROGRAM

For the December meeting we will be touring the West Boise Wastewater Treatment Facility and WaterShed Interpretive Center. These facilities are located at 11818 Joplin Road in Garden City, off of Chinden Road (see attached map). Please plan on being at the Interpretive Center by 11:45 so we can divide up into groups for the tour. Parking is available in the overflow parking lot which is the dirt lot on your right immediately after you go through the main gate. This should be very interesting. Plan on dressing warm and maybe bringing smelling salts! Please RSVP at www.idahoashrae.com.

-Rick Goeres, CTTC Committee

**WHEN: FRIDAY, December 11, 2009
11:45AM—1PM**

**WHERE: Boise Wastewater Treatment Fac.
WaterShed Interpretive Center
11818 Joplin Road
Boise, ID (Garden City)**

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Sabol & Rice of Idaho

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ACCESS DOORS

ACUDOR - Duct, Architectural and Fire Rated Access Doors
NAILOR - Duct and Fire Rated Access Doors

AIR CONDITIONERS/HEAT PUMPS

ESSICKS - Evaporative Cooling Solutions
RETROAIRE - Replacement Package Terminal Air Conditioners and Heat Pumps
*SPACEPAK - High Velocity Central A/C System

AIR DISTRIBUTION

AIROLITE - Louvers, Perforators
AJ MANUFACTURING - Stainless Grilles & Diffusers
AMERICAN WARMING - Industrial Dampers
*NAILOR - Grilles, Diffusers, VAV Boxes, Dampers
WESTERN CANWELL - Ridge Ventilators

AIR DUCT

*FLEXMASTER USA - Insulated, Acoustic Flex Duct

AIR HANDLERS

*ESSICK - Evaporative Coolers
*HASTINGS - Duct Fans, Make-up Air
RAPID - Gas-Fired Make-up Air and Evap. Cooling
SEASONS 4 - Custom-built HVAC specialty equipments and direct replacement of existing multi-speed, single speed indoor and roof top units.
WESTAIRE - Indirect/Direct Evap Coolers

AIR MONITORS

AIRTEST - Gas Monitors and Transmitters

AIR / WATER FILTRATION

FLANDERS - Filters (Bag, Cartridge, HEPA), Housings
PEP FILTRATION - Commercial and Industrial Filtration
PUROFLUX - Process and Cooling Water Filtration Systems
STERIVENT - Dust Collectors

BOILERS/BURNERS

CHROMOLOX - Electric Boilers and Steam Generators
PARKER BOILER - Flexible Tube Boilers
WEBSTER - Forced Draft Burners
WEIL MCLAIN - Boilers for every application, with unmatched reliability.

COMPRESSORS

*KAESER - 3-600 HP Rotary Screw

CRITICAL AIRFLOW CONTROLS

TEK -AIR - Airflow Measurement and Control for Indoor Air Quality and Energy Consumption

ENCLOSURES

SPIDNAKER - Rooftop Screening Systems, Welded Wire Partition Systems

EXHAUST SYSTEMS

VAN-PACKER - Exhausting & Venting Stacks

FANS AND BLOWERS

*ACME ENGINEERING - Roof Exhausters, Fans, Blowers
AMERICAN COOLAIR - Propeller Fans
BROAN - Ventilation Fans, Heaters and Attic Ventilation
ILG - Propeller Fans
NUTONE - Ventilation Fans, Heaters and Attic Ventilation

HEAT TRANSFER

ALFA-LAVAL - Plate Heat Exchangers
BALTIMORE AIRCOIL - Cooling Towers
CC SOLUTIONS - Field-Erected Cooling Towers
RENEWAIRE - Energy Recovery Ventilators
SPIDNAKER - Energy Recovery Ventilators
SUPER RADIATOR - Industrial Coils
THERMAL - Condensers, Fluid Coolers
WATTS RADIANT - Radiant heat solutions from hydronic and electric radiant floor heating and snow melt systems

HUMIDITY CONTROL

DESERT AIRE - Refrigeration Dehumidifiers
*VAPAC - Steam Humidifiers

KITCHEN HOODS

CAPTIVE-AIRE - Nation's leading manufacturer of commercial kitchen ventilation systems
GAYLORD - Commercial Kitchen Ventilation Systems

PUMPS / WATER SPECIALTIES

BARNES - Waste Water Pumps
BLACKMER - Positive Displacement Pumps
HCI - Terminal Valve Kits
*PEERLESS - In-line, End Suction, Multi-Stage Pumps
WHEATLEY - Exp. Tanks, Heat Exchangers

SOUND / VIBRATION CONTROL

AEROSONICS, INC. - Duct Silencers
*M.W. SAUSSE - Spring Isolators

SPACE HEATERS

CHROMOLOX - Solutions for industrial heating applications
NAILOR - Electric Duct Heaters
Q-MARK - Electric Space Heating
REDD-I - Electric Space Heating
RUFFNECK - Explosion-Proof Heaters
SOLARONICS - Gas Infra-red Heaters

*Stocked Lines (Boise and/or Salt Lake City)

HISTORY LESSON

Five Years Ago

The chapter president was Tony Sutton. The meeting was held on December 10, 2004, at the Doubletree Riverside. Ingo Stroup, Senior Energy Specialist with the Idaho Division of Building Safety, gave a presentation on energy efficiency and related code updates.

Ten Years Ago

The chapter president was Ben Strawn. The meeting was held on December 10, 1999, at the Doubletree Riverside. Prior to the regular meeting, Byron Jones, Kansas State University, presented a tech session on thermal engineering for human comfort. At the regular meeting, Byron Jones gave a presentation on thermal comfort.

Twenty Years Ago

The chapter president was Dave Musgrove. The meeting was held on December 8, 1989, at the Kings Table Restaurant. Dean Entorf, Boise State University School of Technology, gave a presentation on the curriculum for this school and future plans for the School of Technology.

IMPORTANT DATES

DECEMBER 11, 2009—ASHRAE Chapter Meeting
DECEMBER 25, 2009—CHRISTMAS DAY
JANUARY 1, 2010—NEW YEAR'S DAY
JANUARY 8, 2010—ASHRAE Chapter Meeting
JANUARY 18, 2010—MARTIN LUTHER KING JR. DAY
FEBRUARY 7, 2010—SUPERBOWL SUNDAY
FEBRUARY 14, 2010—VALENTINE'S DAY
FEBRUARY 15, 2010—PRESIDENT'S DAY

QUOTE OF THE MONTH

“There's nothing sadder in this world than to awake Christmas morning and not be a child.”
~ Erma Bombeck (1927-1996), American author and humorist.



NEWS FROM THE HOME OFFICE

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 straight-forward 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 six 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.

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 Consult-

ing 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.

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.

DECEMBER MEETING

DECEMBER 11, 2009

WEST BOISE WASTEWATER TREATMENT FACILITY & WATERSHED INTERPRETIVE CENTER

11818 JOPLIN ROAD

