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Database of Building, Equipment Owning, Operating Costs Provided by ASHRAE

ATLANTA – Every day, engineers are asked to advise building owners and managers on strategic decisions involving the life cycle and functionality of buildings.

In the past, lack of valid data has left engineers without a solid basis for making these decisions.

A new free online database from ASHRAE provides engineers with equipment service life and annual maintenance costs for a variety of building types and HVAC systems. The database can be accessed at www.ashrae.org/database.

It contains more than 300 building types and more than 38,000 pieces of equipment with service life data.

The database allows users to access up-to-date information to determine a range of statistical values for equipment owning and operating costs. With this, ASHRAE is providing the necessary methods and information to assist in using life-cycle analysis techniques to help select the most appropriate HVAC system for a specific application.

“Life-cycle evaluations provide the most effective method for determining the best value of HVAC system alternatives,” said Lynn Bellenger, chair of ASHRAE’s Technology Council. “In order to facilitate the use of life-cycle analysis techniques by decision makers, the necessary data must be available, current and correctly applied. This database provides that needed data.”

As part of the project, users are encouraged to contribute their own service life and maintenance cost data, further expanding the utility of this tool. Over a period of time, this input will provide sufficient service life and maintenance cost data to allow the comparative analysis of many different HVAC systems types in a broad variety of applications. Data can be entered by logging into the database and registering, which is free.

Information from the database also is used to update the ASHRAE Handbook. Chapter 36, *Owning and Operating Costs*, of the 2007 ASHRAE Handbook, *HVAC Applications*, contains median equipment service life data from the first 163 commercial buildings that were used to seed the database, with updates to come as the database grows.

The database is the result of ASHRAE research project 1237, *Interactive Web-based Owning and Operating Cost Database*, sponsored by ASHRAE’s technical committee 7.8, *Owning and Operating Costs*.

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New York City’s Sustainability Plan, ASHRAE’s Role, Highlighted in Tech Program

ATLANTA – New York City’s ambitious long-term sustainability plan and ASHRAE’s role in helping reduce emissions will be highlighted in a special technical plenary session at the Society’s 2008 Winter Meeting.

New York City's Sustainability Plan: plaNYC will take place from 9:45-10:45 a.m. Jan. 20 at ASHRAE's 2008 Winter Meeting, Jan. 19-23, New York City.

In May 2007, New York Mayor Michael Bloomberg launched plaNYC 2030, setting a range of targets toward creating one of the most sustainable cities in the world over the next 25 years.

One of the goals is to reduce global warming emissions by more than 30 percent relative to current emissions levels. New York City is already one of the most energy efficient cities in the U.S., largely as a result of the extensive mass transit system and relatively low auto use.

Given that some 79 percent of the city's carbon emissions come from buildings, the city is striving to reduce building energy consumption, both in new construction, and more importantly in the 5.2 billion square feet of existing buildings (nearly 1 million buildings) that are currently consuming energy.

The top planners responsible for this effort will present plaNYC, and discuss the role for ASHRAE in helping to achieve the challenging goals. Scheduled speakers are Laurie Kerr, senior policy advisor, and Rohit T. Aggarwala, director, both with the Office of Long-Term Planning and Sustainability, City of New York.

"I look forward to working with ASHRAE on the greening of our building code and reaching our goal of 30 percent carbon reduction by 2030" Aggarwala said. "ASHRAE is the standard on energy performance and therefore, has the opportunity to raise the energy performance bar for all buildings, allowing not only New York City but also the world to reduce greenhouse gas emissions."

For more information about the ASHRAE meeting, Jan. 19-23, New York Hilton, visit www.ashrae.org/newyork.

Held with the ASHRAE Winter Meeting is the ASHRAE co-sponsored International Air-Conditioning, Heating, Refrigerating Exposition, Jan. 22-24, at Javits Convention Center. For more information, visit www.ahrexpo.com.

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08' ASHRAE **ASHRAE Seminar Focuses on Proposed Sustainability Standard**

ATLANTA – A sneak peek at a proposed standard for high-performance buildings will be shared in a seminar at ASHRAE's 2008 Winter Meeting.

Sustainability in Building Codes: ASHRAE/USGBC/IESNA Standard 189.1P takes place from 8-9:30 a.m. Jan. 20.

"Some cities and municipalities have started to mandate that new construction meet sustainability requirements," Katherine Hammack, chair of the seminar, said. "Standard 189.1 is being written to be incorporated as a model code for high-performance, green buildings."

Proposed Standard 189.1P will provide minimum requirements for the design of high-performance new commercial buildings and major renovation projects, addressing energy efficiency, a building's impact on the atmosphere, sustainable sites, water use efficiency, materials and resources, and indoor environmental quality.

It is being developed by ASHRAE, the Illuminating Engineering Society of North America (IESNA) and the U.S. Green Building Council (USGBC).

The proposed standard is expected to go out for a second public review period shortly after the 2008 Winter Meeting.

"The first review earlier this year generated some 900 public comments scattered across most of the document," John Hogan, chair of the committee writing the standard, said. "The largest number of comments addressed whether the proposed language in various sections was normative (as required for a standard). The energy chapter received the most comments followed by the definitions chapter."

"Through this seminar, attendees will be introduced to the standard, learn about how it integrates and differs from the energy efficiency standards and be informed about the carbon dioxide equivalency alternative compliance method," Hammack said. "The standard explains that this is a performance compliance method used to compare the impact of various greenhouse gases based on their global warming potential."

The seminar is sponsored by ASHRAE's technical committee on building environmental impacts and sustainability.

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ASHRAE '08
Data Center Energy Consumption Discussed at ASHRAE Forum

ATLANTA – With industry focus on net-zero-energy buildings, input into how low data center energy consumption can go is being sought at a forum at the ASHRAE 2008 Winter Meeting.

“Data centers typically have high-power densities, and net-zero is not practical if the process load of the electronics is included due to the relatively low-power density of currently available on-site clean power, such as wind and solar energy,” said Don Beaty, chair of the forum, which is sponsored by ASHRAE’s Technical Committee 9.9, Mission Critical Facilities, Technology Spaces and Electronic Equipment.

Long-Term Data Center Planning: the Push Toward Net-Zero Energy and Other Considerations, will take place from 12:40-1:20 p.m. Jan. 20 at ASHRAE’s 2008 Winter Meeting, Jan. 19-23, New York City.

Beaty said forum participants will discuss the impact on net-zero-energy on long-term data center planning.

“We want to know if there are opportunities for datacom facility owners to ‘come clean’ in terms of process energy use, even if there is not sufficient land area to make buildings and facilities net zero,” Beaty said. “This could involve locating datacom facilities in parts of the world with spare capacity of clean grid energy or purchasing clean energy credits.”

Other sessions related to data centers include:

• *High Density Cooling Issues Update—January 2008*, 8-9:30 a.m. Jan. 20.

• *Energy Efficiency and Sustainability of Datacom Facilities*, 11 a.m.-12:30 p.m. Jan. 20.

• *Energy-Efficient Designs for Data Centers: Oxymoron or Reality, Part 1*, 8:30-10 a.m. Jan. 22; *Part 2*, 10:30 a.m.-noon, Jan. 22 sponsored by TC 5.7, Evaporative cooling, and TC 9.9.

• *Data Centers in the Spotlight: National Energy Perspectives and Recent ASHRAE Publications, Part 1*, 8:30-10 a.m. Jan. 23; *Part 2*, 10:30 a.m.-noon, Jan. 23.

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ASHRAE '08
ASHRAE Session Focuses on Designs for Security with Sustainability

ATLANTA – Guidance on building security and emergency planning and response, and doing so while practicing good sustainability measures, will be presented in ASHRAE’s free public session held at the 2008 Winter Meeting.

The session, *HVAC Designs for Security and Sustainability*, takes place from 3-5 p.m. Jan. 22, Javits Convention Center. Admission is free, and attendees receive two New York-approved PDHs.

“Attacks involving chemical and/or biological agents (CBA) are among the most dreaded because of the ease with which they can be produced and disseminated as well as their fatal potency,” said moderator Harmohindar Singh, Ph.D. “Because of the threat posed by CBA, building professionals should be educated about what they are, possible scenarios of their release, how they may be detected, and how buildings may be ‘immunized’ against such threats. At the same time, engineers and architects need to address the building’s overall impact on the environment as security and other measures are put in place. Safety and sustainability can work hand-in-hand to protect occupants and preserve the environment.”

The public session is one of 27 programs presented during the ASHRAE meeting that are approved for New York PDHs. The technical program, presented Jan. 20-23 at the New York Hilton and Javits Convention Center, focuses on net-zero energy use and includes a sustainability track of sessions.

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ASHRAE Continues Building Community of HVAC&R

ATLANTA – Eighty-five years after creating its first chapter outside the United States, ASHRAE has chartered its 170th chapter, based in Indonesia.

“ASHRAE recognizes that technology developed outside North America enhances our knowledge base,” Kent Peterson, ASHRAE president, said. “One way we can share that knowledge is by bringing members together via chapters, which allows them to work together, share ideas, and advance the standards of practice to improve the built environment. We see our chapter program as a way to build the community of HVAC&R.”

ASHRAE’s continued growth is part of its overall strategic plan, which calls for the Society to be a global leader in the HVAC&R community.

In addition to chapters in the United States, Puerto Rico, Canada and Mexico, ASHRAE has chapters in Brazil, Argentina, Singapore, Hong Kong, Malaysia, Taiwan, Philippines, Thailand, India, Saudi Arabia, Egypt, Lebanon, Kuwait, Greece, Sri Lanka, Pakistan, the United Arab Emirates, Portugal, Romania, Poland, Bahrain, Spain and Indonesia.

ASHRAE formed its first non-U.S. chapter in Toronto in 1922. The first chapter outside North America was formed in Singapore in 1984.

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ASHRAE Legislative Round-Up

HUD, USDA Required to Reference Standard 90.1 under New Energy Bill

WASHINGTON, D.C. – The U.S. Departments of Housing and Urban Development (HUD) and Agriculture (USDA) would be required to meet energy efficiency requirements in ASHRAE/IESNA Standard 90.1 under the federal energy bill signed into law by President Bush on Wednesday.

Under existing law, HUD and the USDA are required to write energy-efficient standards for public and assisted housing and housing with federally insured mortgages. Such standards have to be at least as stringent as ANSI/ASHRAE/IESNA Standard 90.1-1989, *Energy Standard for Existing Buildings Except Residential*, and Council of

American Building Officials (CABO)-1992. When either 90.1 or CABO is updated, the agencies have a year to revise their standards, but this has rarely taken place.

Under the new law, HUD and USDA will be required to implement standards at least as stringent as Standard 90.1-2004 or the 2006 International Energy Conservation Code (IECC) for all new construction and rehabilitation of public and assisted housing and housing with federally insured mortgages. Upon revision of 90.1 or IECC, HUD and the USDA have one year to update their standard to meet or exceed the revised requirements. If they do not do so within a year, all new and rehabilitation of housing covered by the federal standard will need to meet the revised IECC or 90.1, following a positive determination by the U.S. Department of Energy and HUD/USDA determination that it would not negatively impact availability or affordability of housing.

“This provides additional validation of the importance of energy savings in Standard 90.1 and also provides a baseline for all public and assisted housing and federally insured mortgage property in all states,” Doug Read, ASHRAE director of government affairs, said.

ASHRAE Provides Technical Guidance on Proposed Depreciation Bill

WASHINGTON, D.C. – ASHRAE has provided technical guidance for proposed legislation that would shorten the depreciation of certain HVAC&R systems.

Reps. Melissa Bean (Ill.) and Pete Hoekstra (Mich.) recently introduced HR4574, which would amend the Internal Revenue Code of 1986 to provide a shorter recovery period for the depreciation of certain systems installed in nonresidential real property or residential rental property.

ASHRAE, at the request of Bean, provided language on the depreciation of HVAC&R equipment. The existing depreciation period is 39 years. The proposed legislation would reduce the period to 20 or 25 years, encouraging replacement of equipment sooner that would result in more modern/efficient equipment being installed.

“ASHRAE contributed language that would encourage building owners to replace older, less-efficient HVAC&R equipment with newer, more efficient systems,” Doug Read, ASHRAE’s director of government affairs, said. “Owners also would receive additional incentive to go beyond the minimum efficiencies required in ASHRAE/IESNA Standard 90.1. Replacing this equipment will result in significant energy savings, reduced greenhouse gas emissions, and would encourage the retirement of older chillers that require the use of CFCs.”

ASHRAE Supports Strengthened Building Code Enforcement

WASHINGTON, D.C. - ASHRAE has lent its support to legislation to strengthen building code enforcement, the Community Building Code Administration Grant Act of 2007.

The legislation, introduced by Sen. Mary Landrieu of Louisiana and Rep. Dennis Moore of Kansas, would provide federal grants to building departments to enhance public safety. The grant would provide \$100 million over five years to help local governments hire, train and equip code officials, including building and fire inspectors.

Moore spoke at a recent Congressional staff briefing, hosted by ASHRAE, which focused on *Standards in the U.S. Economy: Energy Efficiency and Safety in Our Buildings*.

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Get a Piece of the PIE at the ASHRAE Winter Meeting Technical Program in NYC

ATLANTA – For the first time, ASHRAE is offering New York professional development hour credit through the Practicing Institute of Engineering (PIE) at the 2008 ASHRAE Winter Meeting in New York City.

Meeting attendees can earn 1.5 to 2 PDHs in each of 27 sessions being certified through PIE.

One session is available in nearly every technical program time slot scheduled Jan. 20-23 at the Hilton New York or Javits Convention Center. Included sessions span a range of topics such as sustainability, commissioning, mold, exergy and energy recovery. The overall ASHRAE technical program at the meeting focuses on net-zero-energy design in buildings.

“With the ASHRAE meeting registration fee equivalent to what it would cost to earn three to five PDHs, these sessions provide a great value to engineers seeking PDHs for New York state licensing requirements,” says Mo Hosni, chair of the ASHRAE Program Committee.

The following sessions have been approved for New York PDHs:

Seminar 5: Regulations About Re-Circulating Air from Air Cleaning Devices (Dust Collectors)

Seminar 7: Ventilation of Tall Sustainable Buildings

Seminar 11: Improving System EER with Energy Recovery Technology

Seminar 13: Sustainability of Innovative Absorption/Sorption Systems

Seminar 14: CHP 101

Seminar 17: Greening of Hydronic Systems

Seminar 22: Exergy I: Fundamentals of Exergy Analysis for Sustainability

Seminar 23: MGreen Buildings: Practical Experiences with Commissioning

Seminar 31: Exergy 2: Exergy Efficient Design, Analysis, and Rating for Net-Zero Energy Buildings, Part 1

Seminar 36: Commissioning Buildings (GSHP)

Seminar 37: Exergy Analysis 3: Advanced Applications for New Heights in Net-Zero-Energy Buildings

Seminar 39: Applying UVGI Without Getting Burned: Taking Precautions And Overcoming Barriers

Seminar 41: Designing for Dehumidification and Mold Avoidance

Seminar 46 Javits: Standard 62.1 Multiple Spaces Issues

Seminar 50: Integrating ASHRAE's Standards 90.1 and 62.1: How to Save Energy and Improve IAQ

Seminar 54 Javits: Noise Control of Building Services Equipment

Seminar 58: Fire and Smoke Control Dampers

Seminar 59: How to Properly Apply Desiccant Dehumidifiers for Energy Savings

Seminar 62: Mold: Where Do We Stand Now?

Public Session: HVAC Designs For Security and Sustainability (free admission)

Seminar 66: How Do You Connect Your Net-Zero Building to the Grid?

Seminar 71 Javits: Using Ground Source Heat Pumps for Conditioning Schools

Seminar 73: Green Building Energy Performance: Some Experience and Data From the Field

Seminar 80 Javits: Energy Upgrade Project: Planning through Operation

Transactions Session 14: Modeling of Cooling Coils and Cooling Towers

Seminar 85: Developing the Uniform DOAS Design Guide

Seminar 91: Sustainable HVAC Systems for Hospitality Facilities, Part 2

The ASHRAE meeting program also offers several sessions that are approved by the American Institute of Architects for Learning Units.

For a complete listing of technical program sessions or more information about ASHRAE's Winter Meeting, please visit www.ashrae.org/newyork.

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