ASHRAE LOUISVILLE CHAPTER NEWS

American Society of Heating, Refrigeration and Air Conditioning Engineers
Serving the commonwealth for 45 years.

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STUDENT PRESENTATIONS – JOINT MEETING WITH ASME

Monday, March 6, 2006
Dinner Meeting at U of L Vogt Building

ABSTRACT:

University of Louisville students will give presentations on the following topics:

- Head Injury Risk Associated with Feet-First Free Falls in Children by Angela Knight
- Design of an Off-Road Mini-Baja Prototype Suspension by Steven Anderson
- Pediatric Bedfall simulation Model by Kyle Bialczak
- Indentation Response of Polymer Films and Insulation Used in Aircraft Wiring by Kaushik Bindignavile

MEETING LOCATION:

University of Louisville - Vogt Building

Meeting Agenda:

6:00 – 6:45 Dinner – Pizza and Soft Dinks in Room 314
6:45 –8:00 Presentations in Room 311
8:00 Adjourn

There will be **no cost** for this meeting courtesy of the U of L Mechanical Engineering Department.

Please RSVP to Diane Jenne at dljenne01@louisville.edu or (502) 852-6331 in the Mechanical Engineering Department no later than Friday, March 3. Parking tags will be required and will be provided when you arrive.

Reservation form
Number of Attendees _____
Name(s)
_____

_____

_____

UPCOMING EVENTS/PROGRAMS:

Below is a list of upcoming meetings and events for 2006. Please mark your calendars:

April 3 – Humidity Control (Lunch at U of L Alumni Club)
April 19 – CTTC Broadcast
May 15 – Golf Outing

STUDENT ACTIVITIES
Tim Robertson
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VISIT THE LOUISVILLE CHAPTER ON THE WEB!
http://www.ashraeregion7.org/louisville/index.html

MESSAGE FROM THE CHAPTER PRESIDENT

By Ray Beaufait

The 2005-2006 year is over two thirds complete! Attendance at the meetings is up over last year. I would like to thank each of you for attending and contributing to this great year. I hope the remaining programs will meet your needs and the high level of attendance continues.

As most of you should be aware, ASHRAE has been promoting membership growth and requested each chapter increase membership by 10%. The Louisville Chapter has reached 40% (8 out of 20) of the goal and needs your help to gain new members. If you know someone who should be involved, please invite them to a meeting so they can see for themselves "Why ASHRAE". You may be asked "Why join ASHRAE"? Did you know that in a Market Research Study where people were asked what made ASHRAE unique, 93% of our members and 67% of non-members felt that ASHRAE was the *first* and *best* source of technical information.

This month is Student month. We are having a joint meeting with ASME to allow students presentations. Based on these presentations, ASHRAE will be awarding a $500 scholarship to one of the students. This scholarship money is provided to promote ASHRAE and hope to get students involved in ASHRAE as early as possible.

FEBRUARY MEETING REVIEW

Mr. Paul Mattingly II presented a seminar on "Hot gas bypass vs. hot gas reheat - What's the difference and how do I apply each?" The presentation included practical information regarding these two control strategies. The presentation was very informative and discussed typical applications for using these technologies.

The 2006 Chapter Regional Conference (CRC) is in Birmingham, AL from August 10-12. Click here for more details! 2006 Region VII CRC

Harshaw Trane will be posting the Sustainability and the Building Environment satellite broadcast in the Louisville, Lexington and Evansville offices on April 19, 2006 from 1-4 pm EDT. Please RSVP to Allison Motley at (502) 499-7000 no later than April 12.

SUSTAINABILITY FOCUS OF ASHRAE SATELLITE BROADCAST

ATLANTA – Registration opens today for ASHRAE's satellite broadcast on sustainability and the building environment.

Information about building sustainability principles, practices and emerging concepts will be presented in the free April 19, 2006, satellite broadcast and Webcast, Sustainability and the Building Environment. The program will take place from 1-4 p.m. EDT.

Registration opens today for satellite broadcast site coordinators and Webcast participants. Registration opens March 15 for satellite broadcast site participants. To register or for more information, visit www.ashrae.org/greenbuildingsbroadcast.

The speakers for the broadcast will provide guidance on how to practice sustainable building design. They are:

- *Joe Van Belleghem*, partner, Windmill Developments, Victoria, Canada, **Green Buildings and Sustainable Communities – A Developer's Perspective**;
- *Hal Levin*, Fellow ASHRAE, research architect, Building Ecology Research Group, Santa Cruz, Calif., **Sustainability: What Does It Mean and Why is It Important**;
- *Jean Lupinacci*, director, ENERGY STAR commercial and industrial branch, Climate Protection Partnerships Division, U.S. Environmental Protection Agency, **If It's Not Energy Efficiency, It's Not Sustainable: How to Ensure Top Energy Performance in Green Buildings**;
- *Kevin Hydes*, P.E., P.Eng., vice president, Sustainable Practice, Stantec, Montreal, Canada, **Better by Design: Project Studies**;
- *Malcolm Lewis*, Ph.D., P.E., president, CTG Energetics, Irvine, Calif., **Integrated Design for Sustainable Buildings**.

LOUISVILLE/BLUEGRASS ASHRAE CHAPTERS 2006 GOLF OUTING

May 15, 2006 @ 1:00 pm Glenmary Country Club
10200 Glenmary Farm Drive Louisville KY 40291 502/239-6601

Directions from Louisville: (30 minutes) Take I-265/KY-841 to exit 17. Bardstown Road/US-150S/US-31E toward Bardstown for 1 mile, turn left onto Glenmary Farm Drive for .1 mile, turn right at 10200 Glenmary Farm Drive

Directions from Lexington: (60 minutes) Take I-64W toward Louisville, merge onto I-265S/KY-841S via exit 19A then take exit 17 Bardstown Road/US-150S/US-31E toward Bardstown for 1.3 miles, turn left onto Glenmary Farm Drive for .1 mile, turn right at 10200 Glenmary Farm Drive.

This will be a shotgun start, straight (select ball) foursome scramble; dinner & awards following the game.

Team AWARDS: Low Score, Draw 1, Draw 2
Individual AWARDS: Longest drive, Shortest drive, Straightest drive, Closest to hole on green
Warm-up net balls available
Cash beer ($3/ea), soft drink ($2/ea) and snack ($2/ea) carts on course.

Sponsorship with professionally printed sign placed at either tee, green or event area

Completed form and check payable to ASHRAE must be received by April 24, 2006 in order to play

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ENTRY FORM

_____ Foursome @ $ 280.00 _____ Foursome with sponsorship @ $ 340.00

_____ Individual @ $ 75.00 _____ Sponsorship @ $ 70.00

Participant	Dinner (steak/chicken)	Company	Telephone

Captain _____

Player # 2 _____

Player # 3 _____

Player # 4 _____

Sponsor Company Name _____

Contact _____ Phone _____

Please return to: Brent Caswell
CAS • AIR • CO, inc.
PO Box 69
Goshen KY 40026-0069
502/228-4257

Kentucky Office of Energy Policy

FOR IMMEDIATE RELEASE **CONTACT: Pam Proctor** 859-547-2802
pproctor@need.org

2006 High Performance Sustainable Schools Workshop to Showcase Kentucky Schools
Cincinnati Airport Marriott, Hebron, March 23 and 24

FRANKFORT, KY: Thursday and Friday, March 23 - 24 school superintendents, board members, facilities managers, architects and engineers are invited to attend the fourth annual Kentucky High Kentucky schools in the state to implement sustainable design using the High Performance School strategies identified in the U.S. Department of Energy's High Performance Design Guidelines.

Mark Ryles, Director of the Kentucky Department of Education's Division of Facilities Management, believes that sustainable design represents the future for Kentucky's schools. "These buildings provide daylighting for classrooms for better staff and student performance and lower energy costs, geothermal HVAC systems and environmentally sustainable design elements. The buildings can be designed to be a teaching tool with technology that makes staff and students aware of the impact of the facility on the natural environment."

"This is a milestone we've been waiting for," says John Davies of the Kentucky Office of Energy Policy. "In the past we had to take Kentucky school officials out of state to see High Performance design. Now they have a chance to see high performance schools here in Kentucky."

Participants will hear from the school officials and design teams of each of the Kenton County High Performance schools as well as from experts involved in High Performance sustainable school projects across the state. Workshop sessions will explain sustainability concepts, how they enhance the learning environment and the steps to achieving High Performance in new construction, renovation and operations.

School district personnel are being offered a reduced fee of $50 a day or $75 for two days. The business and industry fee is $125 a day or $200 for two days. Registration fee includes breakfast and lunch.

Continuing Education Credit
This workshop has been awarded EILA (Effective Instructional Leadership Act) credit, AIA continuing education unit credit and school board member in-service credit. Certificates will be provided for each educator and architect who attends.

Thursday, March 23 Agenda, 8:30 am – 5:00 pm:
- Sessions on Characteristics and Benefits of a High Performance School Building
- Lunch
- Site visit to High Performance Middle School
- Reception at Marriott

Friday, March 24 Agenda, 8:00 am – 3:15 pm:
- Site visit to High Performance Elementary School
- Lunch
- Afternoon interactive sessions on How to Procure a High Performance Building

Registration Form
To register, go to http://www.energy.ky.gov and download and complete the online registration form or contact: Pam Proctor, The Kentucky NEED Project, 859-547-2802 or E-mail: pproctor@need.org.

ASHRAE GRANTS: STUDENTS STUDY MINIATURE COOLING DEVICES

ATLANTA – A miniaturized cooling system being studied through ASHRAE research could make it possible to safely transport biological tissue and organs to remote areas without electricity.
This proposed novel cooling system also could have an immense impact in the medical field for patients suffering from diseases such as multiple sclerosis, whose mobility is impaired due to their sensitivity to temperature changes.

Research of the thermally activated miniaturized cooling system is being funded by the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE).

Eleven students will receive a total of $103,000 through ASHRAE's grants-in-aid program, which is designed to encourage students to continue their education in preparation for service in the HVAC&R industry.

The recipients were chosen by the Society's Research Administration Committee at ASHRAE's 2006 Winter Meeting. The grants are awarded to full-time graduate students of ASHRAE-related technologies.

"These mass-producible, modular and portable cooling systems are expected to offer revolutionary means of cooling at the small scale under environmentally challenging conditions," said researcher Matthew Determan, Georgia Institute of Technology, Atlanta.

It would consist of a microchannel-based compact absorption heat pump for use as a miniaturized heat pump. The system could be used for hazardous duty vehicular cooling, electronic control units and personal cooling systems for chemical response teams.

Other recipients of ASHRAE grants-in-aid are:

- **Vladimir Vukovic**, The Pennsylvania State University, University Park, Pa., *Real-Time Determination of Indoor Pollutant Source Location*.

- **Lalit Kumar Bohra**, Georgia Institute of Technology, Atlanta, *Fundamental Understanding of Heat and Mass Transfer in the Ammonia-Water Absorber*.

- **Matthew Rooke**, The Pennsylvania State University, University Park, Pa., *Demand Controlled Ventilation for Multiple Space Systems with Independent Room and Occupant Ventilation Requirements*.

- **Margaret Mathison**, Purdue University, Lafayette, Ind., *Modeling and Testing of a Twin Rotary Compressor*.

- **Andreas Nicolai**, Syracuse University, Syracuse, N.Y., *Numerical Simulation of Coupled Heat, Moisture and Salt Transport and Phase Transition Processes with Respect to Durability of Building Materials and Components*.

- **Nandha Kumar Manoharan**, University of Michigan-Dearborn, *Mobile Ericsson Heat Pump*.

- **Sheryll Jerez**, University of Illinois at Urbana-Champaign, *Quantification of Ventilation Effectiveness for Air Quality Control in Plant and Animal Environments*.

- ***Marcin Pazera**, Syracuse University, Model Based Characterization of Construction Materials for Hygric Performance Evaluation*. Pazera received the ASHRAE Life Member Club Award for having the highest rated grant-in-aid application. This grant is supported by a financial contribution from the club.

- **Stefan Bertsch**, Purdue University, *Heat Pumps for Northern Climates*.

- **Thomas Baummer**, University of Maryland, College Park, *A Self-Contained System for Thermal Management of High Heat-Flux Electronics*.

ASHRAE'S MOST USED STANDARDS AVAILABLE ON ONE CD

ATLANTA – ASHRAE's "greatest hits" – its 12 top selling standards and guidelines - are now available on one CD.

Design Essentials: ASHRAE's Most Referenced Standards and Guidelines contains a library of documents that can be easily searched and printed with copy and paste features for text and graphics. The standards and guidelines address design or system operations, and most are code-intended standards.

"Because ASHRAE standards/guidelines often refer to requirements in other standards, our documents need to be used together in order to understand the means for compliance with any one of them," Rick Hermans, chair of ASHRAE's Standards Committee, said. "The Design Essentials CD is intended to make that process simpler for the user."

Hermans noted that the standards and guidelines included in the CD serve as the basis for HVAC&R design and some of them are referenced in building codes.

Included are:

- ANSI/ASHRAE Standard 15-2004, *Safety Standard for Refrigeration Systems*;
- ANSI/ASHRAE Standard 34-2004, *Designation and Safety Classification of Refrigerants*;
- ANSI/ASHRAE Standard 52.2-1999, *Method of Testing General Ventilation Air-Cleaning Devices for Removal Efficiency by Particle Size*;
- ANSI/ASHRAE Standard 55-2004, *Thermal Environmental Conditions for Human Occupancy*;
- ANSI/ASHRAE Standard 62.1-2004, *Ventilation for Acceptable Indoor Air Quality*;
- ANSI/ASHRAE Standard 62.2-2004, *Ventilation and Acceptable* Indoor Air Quality in Low-Rise Residential Buildings;
- ANSI/ASHRAE/IESNA Standard 90.1-2004, *Energy Standard for Buildings Except Low-Rise Residential Buildings (I-P edition)*;
- ANSI/ASHRAE Standard 90.2-2004, *Energy-Efficient Design of Low-Rise Residential Buildings*;
- ANSI/ASHRAE Standard 135-2004, *BACnet®: A Data Communication Protocol for Building Automation and Control Networks*;
- ASHRAE Guideline 0-2005, *The Commissioning Process*;
- ASHRAE Guideline 1-1996, *The HVAC Commissioning Process*;
- ASHRAE Guideline 13-2000, *Specifying Direct Digital Control System*.

The cost of the single-user version of Design Essentials: ASHRAE's Most Referenced Standards and Guidelines is $499 ($429, ASHRAE members). Annual renewal fee for access to updates after the first year is $290 ($220, ASHRAE members).

A network version also is available for organizations so multiple users can have simultaneous access.

To order, contact ASHRAE Customer Service at 1-800-527-4723 (United States and Canada) or 404-636-8400 (worldwide), fax 404-321-5478, by mail at 1791 Tullie Circle NE, Atlanta, GA 30329, or visit the ASHRAE.org

Bookstore at www.ashrae.org/bookstore.

ASHRAE, USGBC, IESNA PARTNER ON BASELINE STANDARD FOR GREEN BUILDING

(Washington, DC) – The U.S. Green Building Council (USGBC); the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE); and the Illuminating Engineering Society of North America (IESNA) announced today that the three organizations have agreed to co-sponsor the development of a new ASHRAE/USGBC/IESNA minimum standard for high performance green building.

Proposed Standard 189, *Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings*, will provide minimum requirements for the design of sustainable buildings to balance environmental responsibility, resource efficiency, occupant comfort and well-being, and community sensitivity. Using USGBC's LEED Green Building Rating System, which addresses the top 25% of building practice, as a key resource, Standard 189P will provide a baseline that will drive green building into mainstream building practices.

Scheduled for completion in 2007, the proposed standard will apply to new commercial buildings and major renovation projects, addressing sustainable sites, water use efficiency, energy efficiency, a building's impact on the atmosphere, materials and resources, and indoor environmental quality.

Standard 189P will be an ANSI-accredited standard that can be incorporated into building code. It is intended that the standard will eventually become a prerequisite under LEED.

"This standard will establish a baseline for a high-performance, green building," ASHRAE president Lee Burgett, P.E., said. "It will allow us to provide for the needs of the present without detracting from the ability to fulfill the needs of the future. Our partnership with USGBC to develop the proposed standard draws on their extensive experience in the green building market and assures that the needs of those who create sustainable buildings are met. We also are pleased to partner again with IESNA, building on the earlier efforts of our two societies in creating design guidance for more energy efficient buildings."

"We are proud to work with ASHRAE and IESNA to bring high performance green building practices to the mainstream," said Rick Fedrizzi, President, CEO and Founding Chair, USGBC. "USGBC's mission is market transformation, and we've long recognized the need to reach beyond the market leaders served by LEED to accomplish it. Given ASHRAE's integrity and long history of leadership in energy efficiency and indoor environment, and IESNA's technical strength in lighting, they're the ideal partners in the effort. We're confident that the baseline standard we'll develop together will raise the entirety of the commercial building marketplace to a new level of resource efficiency."

Fedrizzi noted that concurrent with this initiative, USGBC will begin work on LEED v3.0, which will encompass major advancements in building science and technology, such as LifeCycle Assessment and bioregional weighting.

"Sustainability is the next natural progression in the evolution of standards for building design, allowing us to weigh system solutions against the impact on the environment, while ensuring that buildings meet the needs of those who must work or live in them" said Dr. Alan Lewis, president, IESNA. "Sustainable design is a collaborative approach to architecture and construction and IESNA is pleased to be in partnership with ASHRAE and USGBC."

ASHRAE's technical resources provide the engineering basis for sustainable buildings. Through the Society's *Roadmap for Sustainability*, ASHRAE advocates a sustainable built environment via the use of advanced technologies and develops and maintains productive relationships with other organizations in the sustainability field.

About ASHRAE

Founded in 1894, ASHRAE is an international organization of 55,000 persons. Its sole objective is to advance through research, standards writing, publishing and continuing education the arts and sciences of HVAC&R to serve the evolving needs of the public.

About USGBC

USGBC is the nation's leading nonprofit organization working to promote buildings that are environmentally responsible, profitable and healthy places to live and work. USGBC's membership includes 6,000 corporations,

federal agencies, state and local governments, and nonprofits; and encompasses 65 local chapters and affiliates nationwide.

About IESNA

IESNA is the recognized technical authority on illumination. For over 100 years, its objective has been to communicate information on all aspects of good lighting practice to its members, to the lighting community, and to consumers, through a variety of programs, publications, and services.

HVAC SIMPLIFIED IN NEW BOOK FROM ASHRAE

ATLANTA – Step-by-step engineering design methods and tools are emphasized in a new design manual from ASHRAE.

"*HVAC Simplified* provides an understanding of fundamental HVAC concepts and explains simple design tools used to create building systems that are efficient and provide comfortable and healthy environments," said author Stephen Kavanaugh, Ph.D., a professor of mechanical engineering at the University of Alabama.
Topics include equipment selection and specification, comfort and indoor air quality, ventilation air, ASHRAE standards, building assemblies, heating and cooling loads, electrical and control systems, and design of air and water distribution systems.

"This publication provides the instruction and tools required to specify HVAC systems for many small to medium-sized buildings," he said.

The book includes a CD with spreadsheet programs that incorporate design and computation procedures.
The cost of *HVAC Simplified* is $79 ($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, by mail at 1791 Tullie Circle NE, Atlanta, GA 30329, or visit the ASHRAE.org Bookstore.

ASHRAE PUBLISHES *PRINCIPLES OF HVAC*

ATLANTA – A new textbook designed to also be used as a reference manual that allows engineers to build on their knowledge of HVAC&R design procedures and methods has been published by ASHRAE.

"*Principles of Heating, Ventilating and Air-Conditioning* builds on much of the basic information in the ASHRAE 2005 Handbook, *Fundamentals*, which includes many significant changes," said co-author Ron Howell, Ph.D., P.E. "It serves as a good source for many of the procedures or methods used in HVAC&R design."

The book can be used as an undergraduate or graduate level textbook or for self instruction and as a reference for those who would like reinforcement of their understanding of HVAC&R.

Principles of HVAC elaborates on the use of technical guidance in the Fundamentals Handbook, such as the new radiant time series (RTS) methodology, which includes enhanced treatment of RTS procedures for non-residential cooling and heating loads; a new chapter on residential cooing and heating loads; inclusion of the new ventilation air procedure from ASHRAE 62.1-2004; and changes in the format and quantity of design weather conditions around the world.

The book includes a CD that contains a spreadsheet for the RTS method and the expanded weather data.
Also available is *Principles of HVAC Solutions Manual*, which contains solutions to most of the problems in the principles book.

Co-authors are Harry Sauer Jr., Ph.D., P.E., and William Coad.

The cost of *Principles of HVAC* is $84 ($67, ASHRAE members), while the cost of the solutions manual is $57 ($46, 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, by mail at 1791 Tullie Circle NE, Atlanta, GA 30329, or visit the ASHRAE.org Bookstore.

FIVE BACNET ADDENDA RECOMMENDED FOR PUBLIC REVIEW

ATLANTA – Five addenda to ASHRAE's BACnet standard were recommended for public review at the Society's 2006 Winter Meeting held Jan. 21-25, Chicago.

ANSI/ASHRAE Standard 135-2004, *BACnet® -- A Data Communication Protocol for Building Automation and Control Networks*, allows building equipment and systems manufactured by different companies to work together.

The proposed addenda, *c, d, e, f* and *g*, are expected to be released for public comment in March.
In other news, BACnet committee chair Bill Swan announced the formation of the wireless BACnet working group.

"There is considerable interest in wireless applications for building automation," he said, "This group will work out the details of BACnet wireless communications."

A new means for securing network communications would be provided through proposed addendum g. Over four years in development, the proposed addendum draws on advances in encryption and authentication technologies.

"This system can be scaled way up for high security or way down for simplicity," said Dave Robin, network security working group leader. "It provides two levels of access, with a general key for reading and writing basis system data, and application-specific keys plus authentication for connecting to critical systems including access control (security) and fire safety."

Proposed addendum *f* includes the first of a series of new BACnet access control objects in development in the life safety and security working group. The access door object represents the physical characteristics of an access-controlled door and its associated physical hardware and devices, including door contacts, door locks and card readers.

The BACnet Web services proposed in addendum c has been revised by the XML working group and recommended for second public review following the resolution of 53 comments received from first public review. BACnet Web services provide access to data in BACnet systems using standard PC desktop software vs. specialized drivers. They also are proposed for the communications between energy utilities and BACnet systems for demand limiting and real-time pricing.

The load control object proposed in addendum e has been recommended for second public review. It provides a standardized means for external control over load shedding and is the first of several proposals from the utilities integration working group, working to connect the energy utilities with building automation systems.

The BACnet committee continues its broad range of work on items such as defining a standard mechanism for presenting application devices such as VFDs and VAV controllers; accommodating and adopting new IP technologies; advanced lighting control support; and extending conformance testing as new capabilities are added to BACnet.

COMPLIANCE WITH STANDARD 90.1, 62.1 TOPS ASHRAE'S ONLINE COURSES

ATLANTA – Six online professional development seminars will be offered this spring by the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE).

ASHRAE Learning Institute's professional development seminars provide in-depth information that is timely, practical and advanced beyond a fundamental level. Seminar participants will earn professional development hours, continuing education units, or American Institute of Architects learning units for each seminar completed. Seminars are:

- Complying with ASHRAE Standard 90.1-2004, Energy Standard for Buildings Except for Low-Rise Residential Buildings, HVAC/Mechanical Code, 1-4 p.m. EST, March 15.

- Complying with Requirements of ASHRAE Standard 62.1-2004, Ventilation for Acceptable Indoor Air Quality, 1-4 p.m. EST, March 22.

- Humidity Control I, Basic Principles, Loads and Equipment, 1-4 p.m. EST, March 29.
- Humidity Control II, Applications, Control Levels and Mold Avoidance, 1-4 p.m. EDT, April 5.
- An Introduction to BACnet, 1-4 p.m. EDT, April 12.
- Life-Cycle Cost Analysis, 1-4 p.m. EDT, April 26.

The cost of the seminars is $225 ($150, ASHRAE members).

To register for any of the seminars, visit www.ashrae.org/onlinepds or call ASHRAE's Customer Service Department at 1-800-527-4723 or 404-636-8400 (worldwide), fax 404-321-5478, or mail at 1791 Tullie Circle NE, Atlanta, GA 30329.

ASHRAE RESEARCH PROGRAM HITS $50 MILLION MILESTONE

ATLANTA – With approval of projects at the Society's 2006 Winter Meeting, ASHRAE has funded $50 million in research since the merger of its two predecessor societies in 1959.

"ASHRAE research furthers technology to help keep indoor environments comfortable and productive, deliver healthy food to consumers and preserve the natural environment," Lee Burgett, P.E., ASHRAE president, said. "Only an organization such as ASHRAE has the continuity, the ability to generate research funding, and the expertise to attract researchers from disparate backgrounds and institutions. Only ASHRAE provides a forum to integrate their knowledge and transfer that knowledge to the industry to advance the science of engineering and the art of human comfort."

The first project contracted by ASHRAE was a study of condensing refrigerants in horizontal and inclined tubes at Kansas State University for $7,600. Since that time, ASHRAE has funded some 700 projects. A complete listing of the projects funded since 1960 can be viewed at www.ashrae.org/research.

ASHRAE recently approved funding totaling $1.4 million for 12 research projects. These are:

- *Revised Heat Gain and Capture and Containment Exhaust Rates from Typical Commercial Cooking Appliances, 1362-RP*, researcher Donald Fisher, Fisher-Nickel Inc., San Ramon, Calif., 2 years, $261,000, sponsored by ASHRAE technical committee (TC) 5.10, Kitchen Ventilation.
- *Develop a Standard for Testing and Stating the Efficiency of Industrial Pulse Cleaned Dust Collectors, 1284-RP*, Robert Burkhead and Charles Rose, Blue Heaven Technologies Inc., Louisville, Ky., 18 months, $114,617, TC 5.4, Industrial Process Air Cleaning.
- *Incident-Response Monitoring Technologies for Aircraft Cabin Air Quality, 1306-RP*, J.B.G.A. Havermans, TNO, Delft, the Netherlands, 10 months, $98,000, TC 9.3, Transportation Air Conditioning.
- *Identification and Evaluation of Working Fluids for High Temperature Heating Applications (including Replacements for R-114), 1308-RP*, J. Steven Brown, Catholic University of America, Washington, D.C., 1 year, $68,497, TC 3.1, Refrigerants and Secondary Coolants.
- *Algorithm for Smoke Modeling in Large, Multi-Compartmented Buildings, 1328-RP*, A. Kashef, National Research Council Canada, Ottawa, 18 months, $80,000, TC 5.6, Fire and Smoke Control.
- *Intelligent Control of Combined Heat and Power Systems, 1340-RP*, Itzhak Maor, PWI Energy, Philadelphia, Pa., 18 months, $100,563, TC 7.4, Building Operation Dynamics.
- *Common Data Definitions for HVAC&R Industry Applications, 1354-RP*, Jason Glazer, GARD Analytics Inc., Park Ridge, Ill., 18 months, $127,500, TC 1.5, Computer Applications.
- *Generation of Hourly Design-Day Weather Data, 1363-RP*, Roger Hedrick, GARD Analytics Inc., Park Ridge, Ill., 18 months, $78,400, TC 4.2, Climatic Information.

- *Characterization of Effluents from Additional Cooking Appliances, 1375-RP*, Thomas Kuehn, University of Minnesota, Minneapolis, Minn., 18 months, $124,779, TC 5.10, Kitchen Ventilation.

- *Development of Design Guidelines for Hybrid Ground Source Heat Pump Systems, 1384-RP*, Greg Nellis, Sandy Klein and Jeff Thornton, University of Wisconsin, Madison, Wis., 18 months, $98,135, TC 6.8, Geothermal Energy Utilization.

- *Heat Gains from Electrical and Control Equipment in Industrial Plants, Part 2, 1395-RP*, Warren White, Kansas State University, Manhattan, Kans., 2 years, $192,101, TC 9.2, Industrial Air Conditioning.

- *Scientific Review of Existing Information Related to the Impact of Ventilation Related to Health, 1443-RP*, Hal Levin and Jan Sundell, Indoor Air Institute, Santa Cruz, Calif., 18 months, $50,000, Environmental Health Committee.

ASHRAE HEADQUARTERS RENOVATION TO SHOWCASE SUSTAINABILITY

CHICAGO – The American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) is studying renovation of its headquarters to showcase sustainability.

"The proposed renovation of our current headquarters would incorporate ASHRAE technology and demonstrate our strong commitment to sustainability," Lee Burgett, P.E., ASHRAE president, said. "ASHRAE launched an engineering for sustainability movement this past year. The headquarters renovation is another example of ASHRAE's role as an engineering engine that drives sustainability."

ASHRAE moved to its current headquarters in Atlanta from New York in 1981. The 31,000-square-foot building houses some 100 employees. Recent inspections indicated that the building, constructed in 1965 and last renovated in 1991, needs substantial repairs. ASHRAE explored several options, including purchasing a new building or leasing.

"The potential beneficial environmental impact gained by refurbishing existing buildings to sustainability standards is far greater than new sustainable buildings," Burgett said. "Through this project ASHRAE proposes demonstrating that potential."

The Society's Board of Directors agreed at its 2006 Winter Meeting to study renovating headquarters into a sustainable building.

ASHRAE would work toward the U.S. Green Building Council's Leadership in Energy and Environment Design certification for existing buildings (LEED-EB), with a goal of a gold rating.

The Society also plans to demonstrate specific compliance with ASHRAE standards with respect to energy conservation and indoor air quality. Selected ASHRAE technical committees will be brought into the study to determine how the ASHRAE headquarters renovation can become a "living lab" regarding both energy conservation and indoor air quality.

The study is expected to begin by March 2006 with a final decision on renovation due by September 2006.

ASHRAE AND CIBSE ISSUE JOINT STATEMENT ON CLIMATE CHANGE

ATLANTA – Continued reductions in emissions, guidelines leading to reduced energy consumption and responsible refrigerant use are encouraged in a new joint statement on climate change issued by ASHRAE and CIBSE.

The statement was signed by the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) and the Chartered Institution of Building Services Engineers (CIBSE) at ASHRAE's 2006 Winter Meeting held Jan. 21-25 in Chicago. To read the statement, visit www.ashrae.org/positiondocuments.

"The use of HVAC&R technologies is an essential element of contemporary life," Lee Burgett, ASHRAE president, said. "Yet, HVAC&R systems contribute to greenhouse gas releases through energy-related effects and through the effect of refrigerant losses. Together, ASHRAE and CIBSE are emphasizing improved energy efficiency in HVAC&R technology, low or zero emission energy technologies and responsible refrigerant use."

“This joint statement makes very clear how our two bodies are determined to use the expertise of our members internationally to address the challenges of climate change and sustainability,” Donald Leeper, CIBSE president, said.

CIBSE and ASHRAE provide building design, operation, and energy efficiency standards used globally. Since energy production often contributes greenhouse gas emissions to the atmosphere, these standards potentially reduce emissions. Energy-related impacts are addressed by reducing the equipment system and building energy consumption, and by modifying user behavior, thereby reducing emissions including CO2.

ASHRAE and CIBSE are implementing the following:

- Coordinated approaches to environmental issues at all stages of building and component life cycles;
- Adoption and development of designs, materials, components, systems and processes that minimize environmental impacts, including climate change;
- Promotion of practices that encourage energy efficiency by building users;
- Encouragement of renewable energy supply into buildings and building engineering systems when economically feasible;
- Education of building owners, operators and engineers on the importance of energy efficiency and climate change; and
- Providing of advice, information and assistance related to energy efficiency and climate change to governments and other influential bodies.

“ASHRAE and CIBSE reaffirm their joint commitment to developing and adopting energy efficient practices and resources, and call upon their members, governments, and colleagues in the buildings and related industries to likewise respond,” Burgett said.

ASHRAE, founded in 1894, is an international organization of 55,000 persons. Its sole objective is to advance through research, standards writing, publishing and continuing education the arts and sciences of heating, ventilation, air conditioning and refrigeration to serve the evolving needs of the public.

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Editors Note: The ASHRAE/CIBSE joint statement follows.

Worldwide concern for the global climate has emerged with the recognition of increasing concentrations of atmospheric greenhouse gases (GHGs) and increased average global temperatures. The Intergovernmental Panel on Climate Change (Third Assessment Report, 2001) noted that a signal of human-induced change is emerging from the noise of climate variability.

CIBSE and ASHRAE provide building design, operation, and energy efficiency standards used globally. Since energy production often contributes GHGs to the atmosphere, these standards potentially reduce emissions. Energy-related impacts are addressed by reducing the equipment, system and building energy consumption, and by modifying user behavior, thereby reducing GHG emissions including CO2.

The public has indicated its concern about global warming and climate change. This must be supported by sound business practices, and government incentives where appropriate.

CIBSE and ASHRAE specifically support:

- The goals of the United Nations Framework Convention on Climate Change.
- Government and industry leadership in technology and atmospheric research.
- Development of low-or zero-emission energy technologies.
- Long-term reductions in emissions based on life cycle environmental design, economics and operation.

- Design and operating guidelines leading to reduced energy consumption.
- Responsible refrigerant use, including emissions reduction technologies and practices.
- Building and systems design, and their operation and maintenance, to minimize total GHG emissions.
- Membership education and actions based on environmental responsibility and ASHRAE/CIBSE standards and publications.
- Maintaining economic growth without compromising the needs of future generations.

CIBSE and ASHRAE are implementing the following:

- Coordinated approaches to environmental issues at all stages of building and component life cycles from conception, design, construction, and through operation, maintenance and refurbishment.
- Adoption and development of designs, materials, components, systems and processes that minimize environmental impacts, including climate change.
- Promotion of practices that encourage energy efficiency by building users.
- Encouragement of renewable energy supply into buildings and building engineering systems when economically feasible.
- Education of building owners, operators and engineers on the importance of energy efficiency and climate change.
- Providing of advice, information and assistance related to energy efficiency and climate change to governments and other influential bodies.

CIBSE and ASHRAE reaffirm their joint commitment to developing and adopting energy efficient practices and resources, and call upon their members, governments, and colleagues in the buildings and related industries to likewise respond.

ASHRAE, ASHE PARTNER TO ENSURE HEALTHY HEALTH CARE FACILITIES

ATLANTA – As part of a continuing partnership, the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) and the American Society for Healthcare Engineering (ASHE) will work together to advance and promote the mutual interests of engineers and health care facility professionals. A memorandum of understanding (MOU) between the two groups was signed at ASHRAE's 2006 Winter Meeting held in Chicago, Jan. 21-25.

"With ASHRAE having the primary expertise in HVAC and ASHE having the primary expertise in health care engineering, our joint efforts will ensure that the design and operation of our health care facilities meet the patients' needs for health and safety," Lee Burgett, P.E., ASHRAE president, said.

"Our signatures on this MOU signify an important day in the history of our two organizations," said William Morgan, SASHE, CHFM, 2006 ASHE president. "By formalizing the already strong relationship shared by ASHE and ASHRAE we have committed our organization to continuously improve engineering design and construction for the creation of optimal health care environments."

ASHRAE and ASHE are working together in a number of areas, including jointly developing proposed standard 170P, Ventilation for Healthcare Facilities. The proposed standard will define requirements for ventilation system design intended to provide environmental control for comfort, as well as infection and odor control.

ASHRAE SETS SUSTAINABILITY COURSE WITH NEW ROADMAP

ATLANTA – A new roadmap adopted by ASHRAE will help members lead the march toward a sustainable built environment through use of advanced technologies.

ASHRAE's Sustainability Roadmap was adopted at the Society's 2006 Winter Meeting held Jan. 21-25 in Chicago. The roadmap can be viewed at www.engineeringforsustainability.org or www.ashrae.org.

“By implementing the goals in this roadmap, buildings employing sustainable technologies will flourish, the critical need for contributions by ASHRAE members will be better understood and the quality of life will be enhanced in the present and long into the future,” Lee Burgett, P.E., ASHRAE president, said.

Ron Jarnagin, who chaired the committee that wrote the roadmap, agreed.

“Implementation of the roadmap will help propel ASHRAE into a leadership position in sustainability, energize our members, raise our spirits, attract and retain young members, and contribute substantially to the well being of our world,” he said.

Jarnagin noted that sustainability has become a strong focus for ASHRAE and the industry with the growing realization of the impact on future generations.

“Efficient energy use is of prime importance but so are the materials used, what is emitted and disposed of, and how we impact existing ecosystems,” he said. “We cannot do these things at the expense of human health and well-being. As an organization of professionals responsible for the total life cycle cost of the building, ASHRAE has expertise that impacts elements related to sustainability.”

These elements include energy use, atmospheric emissions, building materials, indoor environmental quality, engineering design and architecture, land use, water use, and waste management and disposal.

As part of the roadmap, ASHRAE will explore making ASHRAE’s meetings greener, developing a standard for recycling used equipment and funding more sustainability- related research projects.

Recommendations in the roadmap include:

- Develop and maintain productive relationships with other organizations in the sustainability field;
- Raise public awareness of ASHRAE’s contributions to sustainability;
- Aggressively market ASHRAE’s sustainability profile in the industry;
- “Walk the talk” by practicing what we preach;
- Develop educational products that assist in sustainable building design, building operation and evaluation;
- Implement the sustainability-oriented objectives in the Society’s Research Strategic plan;
- Accelerate development of the Advanced Energy Design Guide series;
- Consider sustainability certification programs.

ASHRAE, founded in 1894, is an international organization of 55,000 persons. Its sole objective is to advance through research, standards writing, publishing and continuing education the arts and sciences of heating, ventilation, air conditioning and refrigeration to serve the evolving needs of the public.