



SPECIAL PROJECTS SUBCOMMITTEE (SP SUBC)

You might not be aware that ASHRAE regularly takes on "Special Projects," typically funded wholly or in large part by outside sources. These projects enable us to complete important work that advances our purposes as a Society but exceeds our budgetary capabilities. ASHRAE's stature and ability to pull together teams of expert volunteers, together with seed funding from member dues and/or research contributions, leverages large amounts of outside funding. This is the first time that *Members First* has highlighted these projects.

Three Special Projects have wrapped up in the past few months:

- ◆ The *Advanced Energy Design Guide for Small Hospitals and Small Healthcare Facilities* (SP127), published in November, is the sixth and final "30% AEDG." The series was a collaborative effort by ASHRAE, the US Green Building Council, and the Illuminating Engineering Society of North America. These guides, funded by the U.S. Department of Energy, outline prescriptive approaches to reduce energy use by 30% relative to buildings designed to the minimum requirements of Standard 90.1-1999. They are intended to make it easier for designers of small facilities to achieve greater energy efficiency. All of the guides are available for free download at <http://www.ashrae.org/publications/page/1604>.
- ◆ The *Energy Efficiency Guide for Existing Buildings: The Business Case for Building Owners and Managers* (SP118) was also published in November. It is the first of three planned guides on energy efficiency in existing buildings and is available in the ASHRAE bookstore.
- ◆ The *Indoor Air Quality Guide: Best Practices for Design, Construction, and Commissioning* (SP200), was published this January. It fulfills a longstanding need for comprehensive, state-of-the-art guidance on IAQ. The guide was a collaborative effort by ASHRAE, the American Institute of Architects, the Building Owners and Managers Association International, U.S. Environmental Protection Agency, the Sheet Metal and Air Conditioning Contractors' National Association and the U.S. Green Building Council, with major funding from EPA. The summary document is available for free download at www.ashrae.org/iaq. The full publication, including a CD with 500 pages of detailed guidance essential for practitioners, is available in hard copy or electronically through the ASHRAE bookstore. Both the summary and the detailed guidance are loaded with graphics, photos and case studies.

An interesting Special Project that is just getting started will investigate *Ventilation and IAQ in Retail Stores*. This research project, funded by a major grant from the National Institutes of Standards and Technology, will measure ventilation rates and

pollutant concentrations in big box retail stores. A key aim of the project is to establish a reliable and generally applicable methodology to correlate ventilation and IAQ. This will enable future research to be aggregated across studies and ultimately provide a more rigorous basis for ventilation standards.

Seventeen other Special Projects are currently active, ranging from Users' Manuals for new (189.1) and revised (90.1, 62.1, 62.2) standards to the *Commercial Aircraft Cabin Air Quality Study*, a research project with major funding from Boeing and the Federal Aviation Administration.

Martha Hewett, Special Projects Subcommittee Chair

STANDARDS COMMITTEE (STDC)

Standards Committee (and subsequently the Board) approved the following standards committee documents for publication in Chicago:

- ASHRAE Addenda a, c, d, and d to ASHRAE Guideline 0-2005, *The Commissioning Process*
- ASHRAE Guideline 16-2003R, *Selecting Outdoor Return and Relief Dampers for Air-Side Economizer Systems*
- BSR/ASHRAE Standard 23.1P, *Methods of Testing for Rating the Performance of Positive Displacement Refrigerant Compressors and Condensing Units That Operate at Subcritical Temperatures of the Refrigerant*
- BSR/ASHRAE Standard 28-1996 (RA), *Method of Testing Flow Capacity of Refrigerant Capillary Tubes*
- BSR/ASHRAE Addenda z, ah, ai, aj, and ak to ANSI/ASHRAE Standard 34-2007, *Designation and Safety Classification of Refrigerants*
- BSR/ASHRAE Addenda g, q, r, and t to ANSI/ASHRAE Standard 62.1-2007, *Ventilation for Acceptable Indoor Air Quality*
- BSR/ASHRAE Addenda j, m, n, o, p, q, and r to ANSI/ASHRAE Standard 62.2-2007, *Ventilation and Acceptable Indoor Air Quality in Low-Rise Residential Buildings*
- BSR/ASHRAE Standard 87.3-2001 (RA), *Method of Testing Propeller Fan Vibration-Diagnostic Test Methods*
- BSR/ASHRAE/IESNA Addenda e, ar, as, av, az, bg, bh, bj, bk, bl, bm, bo, bq, br, bv, and bw to ANSI/ASHRAE/

ASHRAE Technology is for ASHRAE members. The *Members First!* newsletter is issued after each Technology Council meeting to provide highlights of ASHRAE technical activities and keep members informed. Our goal is to make the work of the technical side of ASHRAE open to all ASHRAE members. If you have technical questions for ASHRAE, please contact Steve Hammerling, Assistant Manager of Research and Technical Services, at 678 539-1158 or via email at shammerling@ashrae.org.

Your feedback is welcome and encouraged! Please write to Bill Bahnfleth, Vice Chair, Technology Council via email at TechCViceChair@ashrae.net

STDC Cont.

/IESNA Standard 90.1-2007, *Energy Standard for Buildings Except Low-Rise Residential Buildings*

BSR/ASHRAE Standard 93-2003R, *Methods of Testing to Determine the Thermal Performance of Solar Collectors*

BSR/ASHRAE Standard 94.2-1981R, *Method of Testing Thermal Storage Devices with Electrical Input and Thermal Output Based on Thermal Performance*

BSR/ASHRAE Addenda *h, k, n, t, u, w, x, and y* to ANSI/ASHRAE Standard 135-2008, *BACnet-A Data Communication Protocol for Building Automation and Control Networks*

BSR/ASHRAE Addendum *b* to ANSI/ASHRAE Standard 140-2007, *Standard Method of Test for the Evaluation of Building Energy Analysis Computer Programs*

BSR/ASHRAE Standard 151-2002R, *Practices for Measuring, Testing, Adjusting, and Balancing Shipboard HVAC&R Systems*

ANSIASHRAE/USGBC/IESNA Standard 189.1-2009, *Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings*, was approved by Standards Committee, Tech Council and the Board of Directors on December 4, 2009. The appeals at ASHRAE were denied, the standard has been published and is available for purchase. The project committee is now working on a User's Manual for Standard 189.1-2009 with the hopes of it being available for purchase later this year. For updates on Standard 189.1-2009 please visit <http://www.ashrae.org/greenstandard>.

Addendum *ai* to Standard 34-2007 was approved by Standards Committee and subsequently the Board at the Orlando meeting. This addendum requires a fee for refrigerant applications plus the cost of mailing the applications to the project committee members. The current fee will be announced on the SSPC 34 website and will be \$1,000.

Standards Committee approved contractors for the User's Manuals for Standards 90.1-2010 and 62.1-2010.

Steve Bushby, Standards Committee Chair

REFRIGERATION COMMITTEE (REF)

REF approved Tom Dosch, PE, as the winner of the Milton Garland Award for his project titled "Innovative Cold Storage Enterprises ICE II". The Milton Garland Award will be presented at the Plenary Session of the Annual Meeting in Albuquerque.

Chapters can start to seek out candidates and projects for next year's Milt Garland and Comfort Cooling Awards. REF has developed an informational summary called "**Introducing the ASHRAE Refrigeration Awards**" to assist ASHRAE in submitting projects for the award competition. The summary, as well as information and procedures for these awards, is available from the REF website,

www.ashrae.org/refrigeration.

REF Committee developed a list of refrigeration speakers as a resource to chapters seeking technical presenters for chapter meetings. The list, posted on the [Refrigeration Committee](#) website, is sorted by region with speaker names, topics and other information. REF is seeking additional speakers to represent all ASHRAE regions and refrigeration topics. Those interested in participating as a speaker may contact amorts@ashrae.net.

Kent Anderson, REF Chair

RESEARCH ADMINISTRATION COMMITTEE (RAC)

I'd like to begin again by thanking you for your contributions to ASHRAE research. One of the ways ASHRAE distinguishes itself as a technical and professional society is its robust program of sponsored research. This research supports publications, the Handbook, standards, design guides, and innovations in the HVAC&R field. ASHRAE's research also supports our universities, bringing new blood and fresh ideas into our industry. In Orlando, I met with the Research Promotion Committee to discuss how ASHRAE's research dollars are used and to see what information the Chapters would like on the ASHRAE Research Program. In addition to the Members First newsletter, the ASHRAE Web site's research page (<http://www.ashrae.org/technology/page/39>) has a wealth of information:

- ◆ Research Implementation Plan, listing all research topics in development (i.e., pending projects)
- ◆ List of active research projects
- ◆ Research report, listing actions taken by RAC at every society meeting
- ◆ Posting of requests for proposals, for those wishing to bid on research projects
- ◆ Draft of the new Research Strategic Plan (more on that later in this article)

If you have specific questions or suggestions, please e-mail Mike Vaughn, the Manager of Research and Technical Services (MORTS@ASHRAE.net) or me (RACChair@ASHRAE.net).

In addition to planning and awarding research projects, at the Winter Meeting RAC recognized some outstanding accomplishments and also awarded 21 Grants in Aid to HVAC&R graduate students. Natan Kotey of the University of Waterloo received the Homer Addams Award for his support of a research project on improving load calculations. John Murphy of TC5.9 received the Service to ASHRAE Research Award for his extensive contributions to all aspects of the TC's research program. Dr. Atila Novoselac of the University of Texas at Austin was selected as the recipient of the New Investigator Award, to support tenure-track Professors beginning their careers. The 21 Graduate Grants in Aid (GIAs) went to HVAC&R graduate students at the following universities: Colorado, Harvard, Illinois-Champaign, Lincoln-Nebraska, Maryland, Penn State, Purdue, Saskatchewan, Syracuse, Texas A&M, Texas-Austin, Tianjin, Wisconsin-Madison. Jitendra Gupta and Brandon Woodland of Purdue hold the added distinction of being named the 2010-2011 Life Member Club grant



RAC Cont.

Member Club grant recipients as the top rated applicants. (These two grants are supported by a financial contribution from the club.) Many outstanding professionals in our field got their start with an ASHRAE GIA, and RAC regards this as an essential investment in ASHRAE's future. Mike Vaughn can provide contact information on our GIA students; why don't you consider calling them and personally inviting them to a chapter meeting?

Every five years RAC is asked to assemble a Research Advisory Panel (RAP) to develop a Strategic Plan for ASHRAE Research. Dr. Jeffrey Spittler of Oklahoma State University chairs the RAP and has posted the draft plan on the ASHRAE research page. In addition to the "typical" TC-sponsored research projects, the ASHRAE Research Strategic Plan for 2010-2015 consists of eleven strategic goals that were chosen to address technical challenges that limit our ability to maximize building performance, energy efficiency, and indoor environmental quality. These were developed based on significant member and Technical Committee input. The Research Plan is not meant to take the initiative for research design from the cognizant committees, but rather to use input from ASHRAE members to identify strategic research needs that are appropriate for many committees to collaborate on, that may require larger budgets, and for which additional outside funding may be available to supplement ASHRAE's budget.

ASHRAE Research already attracts significant co-funding, with Air-conditioning, Heating and Refrigeration Institute (AHRI); *Chartered Institution of Building Services Engineers* (CIBSE); California Energy Commission; and USGBC actively cooperating with RAC to support research. ASHRAE staff have also obtained a \$1.5 million grant from *National Institute of Standards and Technology* (NIST) to investigate updating ventilation standards (ASHRAE 62.1) for retail spaces.

We are trying to make sure your research contributions are used effectively and efficiently. RAC welcomes feedback and suggestions, even criticism, if it will help us to do our job better. (After all, as engineers, we always trying to improve.)

Larry Markel, RAC Chair

ENVIRONMENTAL HEALTH COMMITTEE (EHC)

Environmental Health Committee (EHC) continues to work on several briefs which are intended to inform the ASHRAE Board and membership on significant emerging environmental health issues. A brief on "Ventilation, humidity control and health effects in buildings using split system air conditioning equipment" was finalized at the Orlando meeting. Topics still under development include "Indoor Environmental Quality and Climate Change", "Vector Borne Diseases and Climate Change", and "Ozone/Indoor Air Chemistry". Past emerging issues briefs may be read on the EHC page at <http://www.ashrae.org/members/page/189>.

Planning for the upcoming IAQ 2010, *Airborne Infection Control – Ventilation, IAQ & Energy*, which will take place November 10-12,

in Kuala Lumpur, Malaysia is proceeding. Numerous abstracts for technical papers and workshops have been received and are being evaluated. Information on conference themes, keynote speakers, the venue, and other promotional information is available at the conference website (www.ashrae.org/iaq2010).

Finally, EHC has initiated an effort to evaluate and improve the educational resources available to Chapters in the areas of indoor air quality and other environmental health topics. Members with feedback on the strengths, weaknesses, helpful ideas or constructive criticism in this area are invited to email the EHC chair at steven.emmerich@nist.gov.

Steve Emmerich, EHC Chair

TECHNICAL ACTIVITIES COMMITTEE (TAC)

TAC continues to work with the Conferences and Expositions Committee (CEC) on issues related to the Technical Program at Society meetings. TC's have persistently complained about the lack of available program slots for topics such as fundamental science and engineering, materials, industrial applications, and refrigeration. This is probably because the program themes almost always involve applications of energy efficiency to buildings. Many topics, while vital to future advances in energy efficient design, do not readily fit these themes and the conference tracks based on these themes.

In response to feedback from TAC, significant changes have been made to conference tracks for the Las Vegas (January 2011) and Montreal (June 2011) meetings. Due to the long lead times for program planning, it is too late to make significant changes for the Albuquerque meeting in June. TC members should continue to give feedback (both positive and negative) on the program process to their TC chairs and to their section heads. There will always be a limited number of program slots at ASHRAE meetings, and so we will always, unfortunately, have programs which will fail to be scheduled. TAC is working with CEC to make this process as fair as possible.

What are TCs and do the TC's work?

Sometimes it is good to explain the basics, because the committee structure in ASHRAE can be complex and not very intuitive. Technical Committees (TC's) meet in person twice each year at Society meetings. Most of the technical work of the Society, including Handbook, Programs and Publications, Research, and Standards, directly or indirectly have involvement by the TC's and their members. TAC is the oversight and support committee for the TC's, supporting their work and also making sure that the TC's are operating properly.

There are currently 96 TC's, along with 5 Task Groups (TG's) and 3 Technical Resource Groups (TRG's). TG's are formed when an area of interest includes more than one TC, and also for new areas where there is not yet a TC. (Many current TC's started as a TG.) A TRG is limited to preparing technical materials, and does not have programs or research materials. (*For the rest of this introduction, "TC" will be used to refer to all 3 types of committees.*) The "scope" of a TC is a brief description of its area of interest and expertise. A list of the scopes for TC's, TG's and TRG's may be found at :



TAC Cont.

http://www.ashrae.org/docLib/20090827_TCTGTRG_Scopes_June09.pdf

Ideally, information on a TC's activities could be found on the ASHRAE website, through the list of all TC's found at <http://www.ashrae.org/technology/page/104>. Unfortunately, some TC's do not do a good job of maintaining their websites. Another way to get information on a TC is to contact the TC chair, using an email address of the form TCxxx@ashrae.net, which includes leading zeros in the TC name. For example, the chair of TC 4.7 could be contacted at email address TC0407@ashrae.net.

Can I get involved in a TC if I do not normally go to Society meetings?

YES. Regular attendance at Society meetings is required for voting members. But non-voting members (called corresponding members) can actively participate in TC activities even if they do not attend society meetings. There are many activities such as preparation of handbook chapters, assistance with research, and helping put together programs that others will present at Society meeting which can be done without attendance at the twice-annual meetings. If you do chose to participate without attending the TC meetings, you should make this clear to the TC chair and to others you work with on the TC, so that they do not interpret your lack of attendance at the meetings as lack of commitment.

It should also be noted that the rules for the TC's (known as the MOP) limits the terms of voting members to no more than 4 consecutive years. As a result, a long-time TC member will have to spend at least a year or two as a non-voting corresponding member before they can be a voting member again.

TAC would like to encourage any ASHRAE members who would like to contribute to the technical work of the society to consider getting involved in a TC. The information presented here should help you get started.

Don Brundage, TAC Chair

ASHRAE WEBCAST TO FOCUS ON COMMISSIONING

ASHRAE's Chapter Technology Transfer Committee with support from ASHRAE's *High Performing Buildings Magazine* is sponsoring a **free** Webcast, **"Right from the Start – Commissioning for High Performing Buildings."** The **April 21, 2010** program will provide the building community with tools to overcome commissioning hurdles and make the process "business as usual." This webcast will be transmitted **live** via the Internet from 1:00 – 4:00 p.m. EDT.

"This webcast will highlight how commissioning supports a smoother construction process, maximizes energy and cost reductions, and provides a facility that operates as intended," said Dave Shugars, Chair of the CTC Webcast Ad Hoc Committee, "This program will define the "What, Why, When, and Who" of the commissioning process and provide you with tools to commission your high performing building."

The webcast presenters and their topics are:

Rick Casault, P.E., CCP, CDT

President

Casault Engineering, Seattle, WA

"A Solid Foundation for Commissioning"

H. Jay Enck, CxAP, HBDP, LEED™ AP, CPMP,

Founder/Principal/Senior Commissioning Agent

Commissioning & Green Building Solutions, Inc., Buford, GA

"Transition from Construction to Operation"

Ronald Wilkinson, P.E., LEED™ AP,

Senior Commissioning Project Manager

AKF Group, LLC, New York, NY

"Bringing it all Together"

Online registration begins **March 2, 2010**. To add a registration reminder to your Outlook and find additional information regarding the program and presenters, visit www.ashrae.org/Cxwebcast. If you have questions, call 678-539-1200 or email ashrae-webcast@ashrae.org.

To sign up for the Members First! Newsletter Listserv, please use the following link:

<http://www.ashrae.org/publications/detail/16150>