



MEMBERS FIRST!

MESSAGE FROM THE TECHNOLOGY COUNCIL CHAIR

Technology Council met in April 2008 to conduct a high-level discussion of its role in ASHRAE and how it can better serve the Society's members. The Council goals for Society year 2008-2009 were also discussed. This issue of **Members First!** is a little different in that it attempts to explain what the Council and its Committees are trying to accomplish. As always, questions and comments are welcome.

ISSUES FACING ASHRAE AND TECHNOLOGY COUNCIL

A number of important challenges exist for our Society and Technology Council in particular. Some come from within ASHRAE, while others are generated externally. A few of the more important ones follow:

- Our members and other customers are demanding quicker response from ASHRAE for various products and services (documents, training, speakers and all sorts of technical information). Meeting this demand using our volunteer resources is becoming increasingly challenging.
- How to best use our volunteers' time and talent. As their lives become more complicated, how can we maintain their involvement while respecting the demands of job and family?
- The federal government is mandating that their buildings, and U.S. buildings in general, become much more energy efficient. ASHRAE needs to play a key role in this effort, or it will lose an important opportunity.
- The activities of other Standards Developing Organizations (SDOs) both in the U.S. and internationally is forcing us to think hard about how to keep our standards relevant and to work more closely with these other SDOs.
- There is a large gap between the best practice in building and system design, installation and operation and the typical practice that exists in our

buildings. What do we want to do about this? And what can we do?

- ASHRAE and the industry at large needs to better understand the issues and challenges outside North America.
- How should we address climate change and other environmental impacts?

COMMITTEE SPECIFIC ISSUES

The committees that report to Technology Council all perform critical work within the Society and face their own unique challenges. A few of these are summarized here:

Environmental Health:

- How can this committee do a better job informing the Society of the resources it has to offer and the key environmental issues facing the industry?
- Are there environmental risks associated with "greener" buildings?
- Should ASHRAE also be concerned with outdoor environmental impacts, meaning the effect of buildings on outdoor air and water?

Refrigeration:

- How does this committee relate to the numerous TCs that address refrigeration issues?
- How can we better promote refrigeration activities and address refrigeration issues within ASHRAE?

Research Administration:

- How can we get more research projects that relate to our Society's strategic goals?
- How can ASHRAE get involved in more innovative, cutting edge research?
- How can we assess the impact of our research?

Standards:

- Should our standards try to advance best practice, or focus on minimum levels of performance?

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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 Andrew Persily, Vice Chair, Technology Council at andrew.persily@mail.ashrae.org.

MESSAGE FROM THE TECHNOLOGY COUNCIL CHAIR continued

- How can our standards and guidelines be more globally relevant?
- How can we encourage more international involvement in our standards activities?
- Should ASHRAE write building codes?
- Do we need to change our procedures for developing guides and guidelines?

Technical Activities:

- How can we better connect our Technical Committees with broader Society goals and plans?
- Has the effort to improve the Handbooks been effective?
- How can we get more of our members involved in the Technical Committees?

OPPORTUNITIES FOR TECHNOLOGY COUNCIL

The Council had a good discussion of some potential opportunities to do its job better and to improve its service to members. Here are just a few of these ideas, several of which are already in the works:

- More electronic meetings, to help get our work done faster while respecting our volunteer's time.
- Bridge the gap between the activities of the Council and the important activities at the chapter and regional level.
- Conduct research to quantify the benefits of Commissioning
- Pursue more "topical" conferences that focus on specific issues facing our members today, such as indoor air quality, sustainability, and O&M.
- Pursue strategic alliances with other organizations, to bring their expertise to our members and share ours with their members.

WHAT TO EXPECT NEXT YEAR

- One of the main motivations for this meeting was to discuss what we should be working on next Society year, which starts in July. These plans are still a work in progress, but several exciting activities are envisioned that will hopefully enable us to get some important work done and do a better job for ASHRAE members. Here are just a few of the ideas that are being discussed for next year.
- The Environmental Health Committee is going to try to clarify what we mean by safe air and water.

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- The Refrigeration Committee is going to initiate a number of new activities to promote "green" refrigeration technologies, including a new chapter on carbon dioxide refrigeration in the 2010 Refrigeration Handbook.
- The Research Administration Committee, through the Research Advisory Panel (RAP), is going to work on a new strategic research plan, which is scheduled for completion in 2010.
- The Standards Committee is going to implement a new electronic comment database, which will make it easier for commenters to submit and monitor the status of their public review comments and easier for PCs to process and respond to commenters.
- The Technical Activities Committee is going to implement a TC Website Wizard, which will make it easier for TCs to establish and maintain websites to do their business and to inform ASHRAE members of their important activities.
- The Council itself is considering an "internship" program to expose ASHRAE's younger members, and future leaders, to the activities of the Council and its Committees.



ASSORTED UPDATES

While the spring Council meeting was focused largely on planning discussions, some "regular" business took place and brief status reports follow.

BUILDING PERFORMANCE METRICS

The Building Performance Metrics Steering Committee of Technology Council is progressing on their goals for the year as described below.

Building Performance Metrics & Protocols: A committee is working to develop a set of measurement protocols and metrics to quantify building performance in the areas of energy, water use and indoor environmental quality. They are working to develop a document that defines the protocols and metrics by the upcoming meeting in Salt Lake City.

Carbon Emissions Calculation Tool: This effort involves the development of a tool to reliably calculate the carbon emissions associated with the energy

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consumption of a specific building, taking into account climate variations, changes in fuel sources over the time of day and the time of year, and variations in building occupancy and load profiles. A workshop took place in early May to define the information and analysis needed to support a tool that accounts for these factors.

Performance-Based Energy Benchmarks: In support of meeting the energy efficiency targets of Standard 90.1 and to support the future development of performance-based standards, an effort is underway to develop building energy consumption data on a generic set of buildings and energy performance benchmarks. These benchmarks will be a function of building type and climate and enable comparisons of simulated energy use during the design stage to better gauge how a particular building design can be expected to perform and how different design options will impact energy consumption.

International High Performance Building Database: This effort will collect and disseminate actual building performance data from high performance buildings around the world. These data will include energy consumption, indoor environmental quality and other performance factors. This effort is in the very early stages of development, but should be an important contribution to the realization of high performance buildings.

BUILDING INFORMATION MODELING

This group is working on a BIM Guide that will identify the current state of the art of the industry both with respect to software applications as well as with the related protocols. In doing so it will show the bigger picture - the potential impact of BIM on almost everything ASHRAE does as a technical society - not just on technology associated with building design, but on the actual process of design, construction, commissioning and operation. In addition, this group is working with TC 1.6 Terminology to develop a consistent system of definitions for use by ASHRAE standards and other documents. Such a consistent glossary of terms is critical to the development of functional BIM systems and other electronic documents.

RESEARCH ADMINISTRATION COMMITTEE (RAC)

At or just prior to the spring Technology Council meeting, several projects put forward by RAC were

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approved for ASHRAE funding. As usual, these projects are being funded by member contributions with the research concepts developed by committed volunteers. The approved projects are as follows:

1216-TRP, Inlet Installation Effects on Bi/airfoil Centrifugal Fans, Air & Sounds, awarded to AMCA/CETIAT.

1418-TRP, Optimizing the Trade-off Between Grid Resolution and Simulation Accuracy Coarse Grid CFD Modeling, awarded to the University of Colorado

1397-TRP, Experimental Investigation of Hospital Room Air Distribution, awarded to the University of Colorado.

1480-TRP, Island Hood Energy Consumption and Energy Reduction Strategies, awarded to Architectural Energy Corporation.

1481-TRP, Economic Data Base in Support of Standard 90.2, awarded to the National Association Home Builders Research Center.

Two work statements were also approved and will be released for bid soon.

1369-WS, Design Guidelines to Prevent Snow Causing Shutdown of HVAC Systems, Sponsored by TC 5.2 on Duct Design.

1522-WS, Establishment of Design Procedures to Predict Room Airflow Requirements in Partially Mixed Room Air Distribution Systems, sponsored by TC 5.3 Room Air Distribution.

ENVIRONMENTAL HEALTH COMMITTEE (EHC)

ASHRAE's position document on Indoor Air Quality was approved in 2005, and our procedures require that it be either revised, reaffirmed or withdrawn this year. EHC has recommended that it be revised and has put that process into motion. During this latest meeting, Technology Council approved a chair for the committee tasked with the revision and approved an updated purpose and scope for the document. The current position document can be viewed at the following website:

www.ashrae.org/aboutus/page/335



ASHRAE Annual Meeting
June 21-25, 2008