Technology Council's

DECEMBER 2010

MEMBERS FIRST! NEWSLETTER

VOLUME 2010 ISSUE 4

Message from the Editor of the MFN Committee and Document Review Sub-Committee

At our last Technology Weekend meeting in October, we voted to recommend to the Board of Directors the latest changes and updates to our Position Document "Limiting Indoor Mold Growth and Managing Moisture in Building Systems"
It was subsequently approved by the BOD and will be posted on the ASHRAE website.

An ASHRAE "Position Document" is a BOD-approved document expressing the views of the Society on a current issue of importance to ASHRAE and its members. It includes a concise summary statement as well as supporting documentation, analysis and/or rationale, and recommendations.

The following are active Position Documents:

- Ammonia as a Refrigerant
- Airborne Infectious Diseases
- Building Safety and Security
- Climate Change
- Energy
- Environmental Tobacco Smoke
- Indoor Air Quality
- Legionellosis
- Limiting Indoor Mold Growth and Managing Moisture in Building Systems Problems
- Ozone Depleting Substances
- Natural Refrigerants
- Refrigerants and Their Use in the Built Environment
- Use of Unvented Combustion Devices Indoors

We have been updating our rules regarding how these Position Documents are started and used in our Industry. We are looking at starting 2 more Position Documents in the near future; Technology Council and its committees will be discussing these at our next meeting. They were suggested by our Environmental Health Committee and are on the topics of "Air Filtration and Cleaning" and "Environmental Health in Green Buildings ".

Ross Montgomery, Vice Chair Tech Council

STANDARDS COMMITTEE (STDC)

Founded in 1894 as the American Society of Refrigerating Engineers/ ASRE, ASHRAE's first standard, *Safety Code for Mechanical Refrigeration*, was recognized as American Standard B9 in October 1930 and appeared in the first edition of the 1932–1933 ASRE Refrigerating Handbook and Catalog. Since then, ASHRAE has published 139 standards. Today, 110 standards and 17 guidelines are in effect. 101 standards are ANSI approved standards. Of the 110 current standards, 17 are subject to Continuous Maintenance while 90 are subject to Periodic Maintenance procedures. Of the 16 published guidelines, 3 are subject to Continuous Maintenance and the remaining 16 are on Periodic Maintenance.

The final specifications document for the updating of the Standards Online Comment Database has been completed. The contractor has begun programming and the project is on target to be demonstrated at the PC Chairs breakfast at the Winter Conference in Las Vegas. The intent of the upgrade is to improve the systems use and functionality for volunteers and staff. The major revisions will include an export and import capability to permit the offline use of the system by the project committees in order to respond to commenters without the necessity of an Internet connection. Standards Committee is now working on revising its Manual of Procedures and creating a Reference Manual for Standards Committee and Project Committees.

SSPC 62.1, *Ventilation for Acceptable Indoor Air Quality*, has approved the User's Manual for the 2010 version of the standard. The User's Manual is expected to be available in the ASHRAE bookstore in Las Vegas.

Standard 90.1-2010, *Energy Standard for Buildings Except Low-Rise Residential Buildings,* is now available for purchase in the ASHRAE bookstore. SSPC 90.1 is currently reviewing a draft of the 90.1-2010 User's Manual with the goal of having it available for purchase in Las Vegas.

Standards Committee and subsequently Technology Council and the Board of Directors approved adding the Illuminating Engineer Society as a co-sponsor of ANSI/ASHRAE Standard 90.2, *Energy Efficient Design of Low-Rise Residential Buildings*. SSPC 90.2 is completely rewriting Standard 90.2 to make it easier to use with the goal that it would eventually be referenced in code. The committee will be revising its title, purpose, and scope (TPS) to include lighting systems, major appliances, pools and spas.

The User's Manual for Standard 189.1-2009, *Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings*, is now available for purchase.

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 Ross Montgomery, Vice Chair, Technology Council via email at TechCViceChair@ashrae.net

STDC Cont.

SPC 201P, *Facility Smart Grid Information Model,* has been meeting regularly in order to meet its goal of submitting a draft for public review in February 2011.

Standards Committee and subsequently the Board of Directors approved the following new project: Standard 205P, *Data Exchange Protocols for Energy Simulation of HVAC&R Equipment Performance.*

REFRIGERATION COMMITTEE (REF)

ASHRAE is interested in drafting a course of action on developing a refrigerant management program in cooperation with other organizations. Refrigerant management is an important issue for the industry since the use of refrigerants can have consequences for the environment (as occurred with the early CFC and HCFC refrigerants) if the refrigerants are not managed throughout their lifecycle. Proactive steps in the handling and use of refrigerants will minimize these impacts, and ensure that refrigerants, whether synthetic or naturally occurring, can continue to provide important services as demands grow. REF has been working with TC 3.8 to define the scope, objectives and membership for an ad hoc committee on this topic. The goal of this committee is to develop a concept for a national refrigerant management program and specify actions which ASHRAE can take to support development and implementation of the program.

The Department of Energy is seeking input on a new research program for low-GWP refrigerants. As part of this activity they have been gathering input from stakeholders at various venues, and REF is helping to coordinate a presentation and feedback session at ASHRAE's winter meeting in Las Vegas. The program is titled "Roadmap for Next Generation Ultra-low GWP Refrigerants". The Roadmap will define research needs and an R&D path to facilitate market implementation of low-GWP refrigerants. Through the Vegas presentation, DOE is seeking to inform ASHRAE members and to obtain feedback on issues relevant to the industry.

There seems to be some confusion about the interests of the Refrigeration Committee. We are more than industrial ammonia systems. We are even more than supermarket refrigeration, domestic refrigeration, and transport refrigeration. ASHRAE's *TERMINOLOGY of Heating, Ventilation, Air Conditioning, & Refrigeration* defines refrigeration as the "Process of extracting heat from a substance or space by any means: usually at a low temperature." Besides the refrigeration process, we are also active in refrigerant issues. Our Committee is cognizant over several ASHRAE Position Documents on refrigerants including natural refrigerants, ammonia, and ozone-depleting refrigerants. The Committee works to identify presenters for ASHRAE conferences who speak on issues related to refrigerants and the refrigeration process. Look at the Refrigeration Handbook: topics include halocarbon and CO_2 systems, refrigeration system chemistry, and refrigerant containment. Look at our Chapter resource for speakers – there are presenters on ammonia, water, CO_2 and nitrogen as refrigerants, as well as using secondary coolants. We even have an annual award for Comfort Cooling given to project designers and owners in recognition of innovative concepts, incorporation of new technologies, or solutions to complex problems. So the next time you think that the Refrigeration Committee has nothing of interest to you, think again!

Cynthia Gage, REF Chair

RESEARCH ADMINISTRATION COMMITTEE (RAC)

Typically four times a year, RAC reviews RTARs and work statements as part of the process of developing ASHRAE research projects. An RTAR (Research Topic Acceptance Request) is a short whitepaper that describes the benefits, objectives, and approach for a research project that is developed by a Technical Committee (TC) within ASHRAE. RAC will generally approve RTARs if the potential benefits are appropriate for ASHRAE and the project is well thought out. Then, the TC is encouraged to develop a detailed work statement which ultimately can become a request for proposals that outside organizations can bid on.

In its fall meeting, RAC reviewed seven work statements and twelve RTARs. A number of them were returned to the TCs for improvement, but several were accepted. The work statements that were accepted went into the queue of projects that will ultimately be released for bid. However, the 2010-2011 Research Budget is such that only two projects were released for bid this fall, whereas nineteen projects are still waiting for sufficient funds to be available next year. The two projects released for bid were: 1) 1580-TRP - *Study of Input Parameters for Risk Assessment of 2L Flammable Refrigerants in Residential Air Conditioning and Small Commercial Refrigeration Applications* and 2) 1613-TRP - *Update Climatic Design Data in Chapter 14 of the 2013 Handbook of Fundamentals*. These projects were felt to be of immediate importance to ASHRAE membership and have relatively small budgets.

In addition to funds allocated for research projects, the 2010-2011 Research Budget covers a New Investigator Award for young faculty and Grant-In-Aid Awards for graduate students who are conducting research on topics of relevance to ASHRAE. There are many past recipients of these awards who have made significant contributions to ASHRAE and the HVAC&R industry. The spring newsletter will highlight some of the past recipients who have impacted ASHRAE and will also provide a list of the 2011 awardees. Contributions of the membership are critical in sustaining this program and encouraging R&D careers within the HVAC&R industry.

James Braun, RAC Chair

TECHNICAL ACTIVITIES COMMITTEE (TAC)

It is that time again to review technical committee (including task groups and technical resource groups) objectives and assignments. Many technical committees have continued to be active and worked on the specifics of handbook chapters that are being updated, programs that are to be presented in the next or future meetings, or developed new initiatives. All of these efforts are accomplished by dedicated volunteers and is an enormous undertaking by these individuals.

In the last article, it was stated that the Technical Activities Committee, TAC, is encouraging the technical committees to network with other committees to expand the horizons of their work efforts. There are opportunities to utilize the expertise not available within their own committee. TAC is exploring the possibility of creating a guaranteed time slot in the conference programs for committees that have networked with another committee or committees to work on a specific initiative. Of course a dedicated time slot for the joint committee program must be run through the Conferences and Exposition Committee (CEC).

The winter meeting is the time that the Roster Update Forms must be submitted by each TC, TG, and TRG. This task must be accomplished in a timely manner. The Roster Update Forms will be distributed by the Section Heads prior to the meeting. Completing the Roster Update Forms is required in order for a committee to have an approved roster. Without a roster, the committee will not officially exist. Some of the committees are thriving and have no problem in achieving quorum at each and every meeting. Other committees struggle to have quorum. In any case, attracting new members with new ideas and vigor remains a high priority for all committees. In this regard, encourage your current members to communicate with the grass root membership in their local ASHRAE chapter. Ask your local chapter to provide some financial support for individuals, if possible, to encourage attendance at the regional and national meetings. Many of the local members may think that they cannot become a member of a technical committee. Invite members of your local chapter to become involved in ASHRAE technical committees.

As previously stated, TAC is available to assist committees as the need arises. Contact your TAC Section Head.

Charles Wilkin, TAC Chair

ENVIRONMENTAL HEALTH COMMITTEE (EHC)

ASHRAE IAQ 2010, Airborne Infection Control - Ventilation, IAQ and Energy, November 10-12, Kuala Lumpur (KL), Malaysia

ASHRAE's IAQ Conferences started in 1986 and the 16th one was held for the first time outside of the United States in Kuala Lumpur (KL), Malaysia November 10-12, 2010.

EHC Cont.

The theme was Airborne Infection Control and was supported by several other organizations including the International Society of Indoor Air Quality & Climate (ISIAQ), the UK based Chartered Institution of Building Services Engineers (CIBSE), The Institution of Engineers Malaysia (IEM) and four others based in Malaysia in Architectural, Engineering and HVAC fields.

Rather than tell you my comments regarding the Conference, let me share with you what others have said. *(Comments have been edited for length)*

For those who could be in KL, I am sure you would agree that IAQ 2010 has turned out to be a successful conference. I guess we can all be proud of having delivered a memorable 16th ASHRAE IAQ conference in KL. The number of participants (282), excellent plenary talks (4), lively workshops (4) and the high quality scientific papers (48) over two and half days is testimony to the success of this historical conference. Two Society officers participated in the conference. President Lynn Bellenger addressed the closing plenary session and Vice President Bill Bahnfleth chaired a workshop on ultraviolet germicidal irradiation.

I would like to take this opportunity to thank all the members of the IAQ 2010 Steering Committee and the ASHRAE Staff involved with this conference, particularly Steve Hammerling, and the entire MASHRAE chapter (with particular mention of the host organizing committee under the leadership of Mr. T.L. Chen and Mr. YK Ng Yong Kong for all the hard work in ensuring the success of this conference. To me, the journey has been enriching and satisfying. *-Chandra Sekhar, Conference Committee Chair*

The Conference was a great challenge for all of us and me especially as it was a "fusion " of the ASHRAE or American way with what you might call the international way and our local Malaysian way. I thank the Steering Committee very much for the advice, comments, help and support given for the past 2 ½ years. It has been really great and satisfying working with you all. *-Ng Yong Kong, ASHRAE Malaysia Chapter*

EHC Cont.

The ASHRAE Malaysia team did a great job. All participants went home feeling they had participated in a very well organized conference with top international presentations.

And I must say your chapter is alive and kicking. I only have one complaint: The time in KL was too short. *-Bjarne Olesen, Steering Committee Member*

I want to express my great satisfaction with the IAQ 2010 conference. The ASHRAE Malaysia Chapter and in particular the local organizing committee has done excellent work to organize this conference.

I have heard from many people about the high technical quality of the papers presented in this conference. Usually, conferences do not reject many papers, but IAQ 2010 did. Quality is far more important than quantity. It was also a great experience working with you all during the past 2-1/2 years. *-Xudong Yang, Steering Committee Member*

I was extremely impressed by the quality of the organization of the conference by the Malaysian Chapter and especially want to acknowledge their work with emphasis on the enormous contributions of Mr. TL Chen and Mr. YK Ng Yong Kong. I extend my gratitude to all who contributed and especially to our Malaysian hosts, Chandra, and Steve Hammerling (ASHRAE staff liaison). Thanks for an excellent conference. I believe the efforts to prepare the Proceedings will pay off in dividends for all the recipients as well as for all those who purchase them. Environmental Health Committee should take advantage of the tremendous success of the conference in considering the topic and venue for the next conference. *-Hal Levin, Steering Committee Member*

I am personally grateful for the very gracious hospitality the ASHRAE Malaysia Chapter provided at every step of the way. In addition to the learning and interaction with colleagues, it was extremely rewarding to stay for the 25 year anniversary dinner, feel the excitement and witness the tremendous organization the ASHRAE Malaysia Chapter has built. It is a wonderful feeling to be part of a global organization that this Chapter continues to help ASHRAE be.

We welcome proposals from other areas of ASHRAE for upcoming meetings to be sponsored by ASHRAE.

Larry Schoen, EHC Chair

ASHRAE Webcast Highlights Ground Source Heat Pumps

While temperatures above ground vary with the seasons, one constant is the temperature underground that stays relatively the same all year. Designers in the built environment using ground source heat pump systems are harnessing the energy underground to help with heating and air conditioning in the buildings they design.

ASHRAE's upcoming webcast **"Ground Source Heat Pump Systems – Putting the Earth to Work for You"** will focus on this method of using underground temperature to create a system using natural resources to save energy and money at the same time. The webcast takes place **April 21, 2011, from 1:00 – 4:00 p.m. EDT**. This **free** webcast is brought to you by the Chapter Technology Transfer Committee and sponsored by ClimateMaster, Mammoth and Taco.

"The overwhelming choice from our several webcast surveys has been ground source heat pump systems," Dave Shugars, Chair of the CTTC Webcast Ad Hoc Committee, said. "This webcast will highlight several critical factors in the evaluation and design process that are essential to deliver system efficiency. From understanding ground characteristics, to avoiding pitfalls of design and installation, the webcast is a must see for discerning owners and designers alike."

The webcast presenters are:

Jeffrey D. Spitler, Ph.D., P.E., Professor in the School of Mechanical and Aerospace Engineering, Oklahoma State University, Stillwater, Oklahoma

Kirk T. Mescher, P.E., Principal, CM Engineering, Inc., Columbia, Missouri

Mr. Mick Schwedler, P.E., Manager, Applications Engineering, Trane, LaCrosse, Wisconsin

Online registration for the webcast begins March 21, 2011. For more information on the webcast program, continuing education credits, and ASHRAE ground source heat pump resources, visit www.ashrae.org/ghpwebcast. If you have questions about the webcast, 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