



February 6, 2011: Vol. 54, No. 06

Produced by: Daniel C. Merkel  
Chapter Newsletter Editor/ Chairman

*The Therm*, is a monthly Newsletter for chapter members and HVAC&R professionals alike, that provides information about the Fort Worth Chapter of ASHRAE.

Next Chapter Meeting

Data Center Design

February 15, 2012  
11:30 A.M.

Carter::Burgess  
Plaza  
777 Main St.  
40th Floor  
Fort Worth, TX

[Click here for map.](#)

## President's Message



Thanks to everyone that attended our last meeting in January. We had another record attendance! Please continue to RSVP as soon as possible.

Last month, we learned about data center design and some exciting research that is being conducted right now by ASHRAE as well as research being done by our very own Student Chapter Members at UT Arlington. If you didn't make it, you missed a great meeting, but there are still more exciting meetings coming up. This month, we will be talking about **Critical Environments**.

Around Fort Worth, there is a mixture of good news and bad news. We just learned that American Airlines, one of the premier employers in Fort Worth, is cutting 13,000 jobs. Not exactly the spark we want to see so early in the year for our area. We certainly hope for growth in other industries to offset this hit. General Motors may help as they begin construction this month on a new \$200 million stamping plant in Arlington. Let's all support that growth! Also, keep an eye on the local natural gas market as our Fort Worth neighbors continue to benefit from the Barnett Shale. Quicksilver is also expected to spend \$108 in Fort Worth.

From a macro view, projects that were put on hold last year seem to be starting again. Design and survey efforts are picking up in the private and public arenas, so we should see increased workload in Fort Worth for vendors and contractors later this summer.

## President's Message (cont.)

In Fort Worth ASHRAE business, our number of delinquencies is holding at **25**. Please check with us at the next meeting (or online at [www.ashrae.org](http://www.ashrae.org)) if you are not sure if you are up-to-date with your membership.

Also, everyone has probably heard by now that ASHRAE has rebranded itself in an effort to reflect our commitment to moving from focusing solely on HVAC&R, to providing guidance for total building design, reconstruction, construction and operation. You can read the official release from Society President Ron Jarnagin here (<http://www.ashrae.org/news/ashrae-announces-rebranding>). Look for the Fort Worth Chapter to incorporate the new style and logos soon.

Locally, the Winter Party is slated for February 17<sup>th</sup>. We are hoping for some winter weather by then. The party will be held at the facilities of TD Industries (5700 Stratum Dr), and will include the popular casino gaming tables. Please join us!

The next golf tournament is also approaching. It will be in early April. Stay tuned for more details as we solidify the venue. Also in April, our CRC will be in Tulsa, OK this year. Read more about it later in the newsletter.

Again, this month we will be meeting at the regular location – the Petroleum Club on the **40<sup>th</sup> floor** of Carter::Burgess Plaza. See you there!

Sincerely,

Richard Watters  
Chapter President

## February Program

**Date:** February 15, 2011

**Time:** 11:30 a.m. – 1:00 p.m.

**Location:** Carter Burgess Plaza Petroleum Club – 40<sup>th</sup> Floor

**Topic:** Critical Environments

### Speaker Info.

Nolan Hosking, P.E. – Product Manager – Critical Environments – Price Industries

### Speaker Bio

- 10 years with Price Industries
- ASHRAE/ASHE member
- Involved in new product development
- Application engineering support and system design
- Mechanical Engineering degree is from University of Manitoba, in Canada
- MBA from University of Western Ontario, in Canada

He has helped develop the following product lines for Price industries -

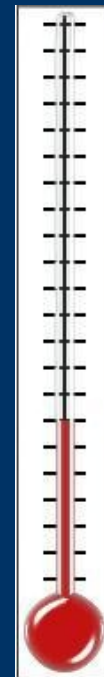
- Air curtain systems
- Fan filter units
- Venturi valves

RP Dollars



8,362

PAOE Points



10,580

3,400

[CLICK HERE TO  
CONTRIBUTE!](#)

## February Program (cont.)

### Presentation Outline

The presentation will focus on fan filter units and how to select them and the difference in HEPA and ULPA filtration and how to design Operation Room's and Cleanrooms to help avoid infiltration and maintain a consistent and clean airflow throughout the space.

The presentation will be in two parts:

Applying fan filter units to clean room design (20 mins)

- ☐ Advantages to using fan filter units vs. pressurized plenum spaces
- ☐ Selection criteria and considerations for fan filter units

Using air curtain systems in operating rooms (30 mins)

- ☐ Diffuser configurations of full laminar and air curtain systems
- ☐ Challenges with laminar system performance and practicality
- ☐ Relative benefits of air curtain systems
- ☐ Performance studies and existing research

## Board of Governors Meeting Minutes – January 18, 2012

**Called to Order by Richard Watters at 10:30 am**

### **President's Award of Excellence (PAOE) Need to Update**

	<u>Par</u>	<u>Last Year</u>	<u>YTD</u>	<u>Goal</u>
○ Membership Promotion:	800	2350	125	1450
○ Student Activities:	500	2316	375	1585
○ Research Promotion:	1050	1650	215	3015
○ Historical Reporting:	300	375	275	600
○ Chapter Operations:	600	1865	1235	1980
○ Chapter Technology Transfer:	850	1675	1025	1950
TOTALS	4,100	10,231	3,250	10,580

### **Officer Reports**

#### ***a. President-Elect (Merkel)***

- Update: Nominating Committee – New people were selected and accepted.
  - Committee needs to meet and get ready to report per the by laws
  - Buddy will read names at today's meeting and voting will be next month.
- Voting Member / Delegate for CRC – Dan/Tony
- President Elect Training – Dan/Richard

### *b. Secretary (Finch)*

- Update: Roster published – Roster is completed, emailed and printed.
- Alternate for CRC – Yes, Tony will be there.

### *c. Treasurer (Sullivan)*

- “Unclaimed” checks for past Student Scholarships have been removed from the ledger
- Invoicing local member who are not paying local dues – Will write a nice letter to local as well as dual members needing to be invoiced.

### *d. BOG At-Large (Bost, Ellis, Parish)*

- Patty Parrish will write an article on energy and valves.

## Committee Chairman Reports

### *a. CTTC (Upham)*

- Technical Tour – Will set date for March with Jay Martin
- Working with DFW Airport CP and will also join with Dallas Chapter for their tour of AA Center.

### *b. Historian (Parrish)*

- Recall Interviews
- Member profile honoring the life of Bob Jackson – Will contact John Speck.

### *c. Honors & Awards (Akers)*

- Possible nominations for Fellow, DSA, Exceptional Service Award

### *d. Membership Promotion (Olivo)*

- Membership Upgrades
- Contact members that have fallen off the roster
  - Lost 2 members in November and 3 in December.
- Delinquencies are **22/311 (7%)**, which is down from last month. Need to improve. Most of these people have been members for over 5 years.

### *e. Refrigeration (Martin)*

- Meeting topics with CTTC
- Tours

### *f. Research Promotion (Bost)*

- Funds raised to date - \$12,098.45, 43% of our goal
- Meet with Matt and Sean to plan next golf tournament fund raiser.

### *g. Special Events (Rath)*

- Update: Winter Party – Working on ideas of how to keep costs down, but still have fun.
- Membership Promotion Event – Happy Hour in April
- Next Golf Tournament – Still a work in progress

### *h. Student Activities (Schroeder)*

- Update: January “Back to School” event for UTA and TCU – Sent emails to both schools, set up lunches and speakers for lunch meetings on campus for each school.
- Trying to set up joint TCU/UTA event.

## Board of Governors Meeting Minutes – January 18, 2012 (cont.)

### *i. Webmaster (Pace)*

- Website / Forum – Updated the website so the documents display better and added new graphic
- Credit card payments – Cody has software and hardware – flat 2.7% charge – will test next month.
- Created job posting page.

### *j. YEA (Martinez)*

- Look at roster with Tyson for YEA students that can upgrade to Associate Member (post graduation) – Will take care of this before next month.
- Update: YEA Event – trying to set up this month or next.

## Old Business

- CRC Committee – 04/26 – 04/28 in Tulsa
- Technical Article for the Therm or the Website (EVERYONE) – Please do
- Job Postings on Website and Newsletter - Yes

## New Business

- New Chapter By Laws have been approved by Society – on the web for download

## Closed meeting at 11:23 am

## General Business Meeting Minutes – January 18, 2012

### Call to Order at 11:41 am

### Old Business

- Delinquencies – currently 7% of our membership is delinquent on dues (22/311). This is down from last month, but we picked up 2 newly delinquent at the end of December and 3 newly delinquent at the end of November. Please check your membership status with Tony on the way out. If you are not receiving the newsletters, that may mean that your membership has lapsed and Society has removed you from our roster.

### New Business

- Clif Upham motioned to approve Meeting Minutes for last month; David Muzzy seconded.
- PAOE totals right now are 3,250 points towards our goal of 10,580 points.
- Two new members since our last meeting – WELCOME to Bob Arison with TFG Sales and Garrett Brown with Summit Consulting.
- We are excited to have some of our student members in attendance from TCU:
  - Andy Goolsby (President of the TCU Student Chapter)
  - Leanne Werner

And from **UTA**

- Marianna Vallejo
  - Betsegaw Gebrehiwot
  - Richard Eiland
  - *John Fernandez*
- Our Roster has been published and emailed to all members. If you did not receive a copy, please talk to any of the officers – especially Tony Finch in the back.
  - **CRC** is coming! You should have received a notification with the schedule by email, and there is a copy in the Newsletter. It will be held this year in Tulsa, Oklahoma on April 26<sup>th</sup> thru 28<sup>th</sup>.
  - Our March Meeting will be one week early in order to bring in a Distinguished Lecturer - Paul Pieper. We will be in the Petroleum Club, just one week early. The presentation will be on Understanding and Evaluating Air-to-Air Energy Recovery Technologies.

### Nominations for Next Year

- Buddy Pace named the new Board of Governors:
  - John Maryak, Richard Long, David Muzzy, Richard Watters, Dan Markel, Tony Finch, Jay Sullivan, and Clif Upham.

### Special Events

- Happy Hour
- Winter Party

### Program

- Clif Upham introduce speaker
  - TC 9.9
  - The Green Grid
  - OpenCompute.com (information on Facebook's data center)
- Presentation Outline:
  - Datacenter thermal requirements are typically governed by both ASHRAE specifications, and by the operating temperature range specified by server manufacturers. In the last five years, both ASHRAE and server manufacturers have made changes to their respective requirements. These changes have primarily been in response to the demand by datacenter operators for more efficient cooling systems and greater datacenter design flexibility.
  - Expanding the allowed ASHRAE operating envelope, and increasing the high end operating temperature of servers allows operators to use more energy efficient cooling techniques. These techniques include free air cooling, adiabatic cooling, or combinations of both. Also, by increasing cooling system efficiency and design flexibility, operators are able to better utilize lower cost, modular approaches to datacenter design.
  - The presentation will summarize ASHRAE requirements, explore present and future energy efficient cooling techniques, discuss modular datacenter design concepts, and review some recent CFD investigations into datacenter cooling.

## General Business Meeting Minutes – January 18, 2012 (cont.)

### Closing

- Reminder – Meeting next month in the usual location!
- Reminder – March meeting will be one week early – at the usual location!
- Please fill out those speaker evaluation forms.
- Meeting adjourned at 12:40 pm

## Treasurer's Report – Jay Sullivan

STARTING BALANCE DATE	1/1/2012
NEW BALANCE DATE	1/31/2012

**Treasurer's Report** *Jay Sullivan*

### Financial Data:

Starting Balance (1/1/12): **\$ 5,219.57**

#### Deposits:

1/18 - Deposit Payment for Lunch Collections at door	\$ 1,025.00
1/31 - Deposit Bartos Check for Golf Tournament	\$ 550.00
1/31 - Deposit TD Check for Golf Tournament Sponsorship	\$ 150.00
1/31 - Check from National Chapter for Local Dues Paid	\$ 420.00
1/31 - Check from Eventbrite for January Luncheon Meeting	\$ 325.00
1/31 - Check from BHB for Roster Sponsorship	\$ 100.00
RECONCILE UNDISTRIBUTED SCHOLARSHIP PAYMENT FROM JULY 2010	\$ 500.00

**Subtotal:** \$ 3,070.00

#### Payments:

1/18 - Check #5172 - Payment to Clif Upham to reimburse him for January Lunch	\$ 1,323.23
1/18 - Check #5173 - Payment to Tony Finch for Reimbursement for Roster Hard Copies	\$ 432.63
1/26 - Check #5174 - Payment to Sean Rath for Reimbursement for Happy hour gift cards	\$ 117.91

**Subtotal:** \$ 1,873.77

**New Balance as of 1/31/12:** \$ 6,415.80



## **Fort Worth ASHRAE Winter Party 2012**

TD Industries will host this year's Winter Party on

**February 17, 2012 from 6pm—10pm**

5700 Stratum Drive  
Fort Worth, TX 76137

Please make plans to join us for  
dinner, drinks (cash bar), and casino games!

Cost is \$40 (spouses and significant others are welcome)

All proceeds go to support the operating budget of the Chapter

Please contact Sean Rath ([srath@bhbinc.com](mailto:srath@bhbinc.com)) for more information.



## ASHRAE Learning Institute 2012 Spring Online Course Series

### 2 WAYS TO REGISTER

**Internet:** [www.ashrae.org/onlinecourses](http://www.ashrae.org/onlinecourses)

**Phone:** Call toll-free at 1-800-527-4723 (US and Canada) or 404-636-8400 (worldwide)

**Note:** You may register up to 24 hours prior to an online course. Courses are in US Eastern Standard Time.



**District Cooling & Heating Systems**

Mon, March 19, 2012 – 1:00 pm to 4:00 pm ET

**Basics of Combined Heat & Power**

Wed, March 21, 2012 – 1:00 pm to 4:00 pm ET

**Evaluating the Performance of LEED®-Certified Buildings**

Wed, March 28, 2012 – 1:00 pm to 4:00 pm ET

**Commissioning Process & Guideline 0**

Wed, April 4, 2012 – 1:00 pm to 4:00 pm ET

**\* Complying with Standard 90.1-2010: HVAC/Mechanical**

Mon, April 9, 2012 – 1:00 pm to 4:00 pm ET

**\* Complying with Standard 90.1-2010: Envelope/Lighting**

Wed, April 11, 2012 – 1:00 pm to 4:00 pm ET

\* Take both Standard 90.1 courses and save 20% on the price of these courses



**The following courses are comprised of two parts. Registrants must attend both parts in order to receive CEU/DPH credits. Archiving is available.**

**Humidity Control: Principles and Applications – Part 1**

Mon, March 26, 2012 – 1:00 pm to 4:00 pm ET

**Humidity Control: Principles and Applications – Part 2**

Mon, April 2, 2012 – 1:00 pm to 4:00 pm ET

**Implementing ASHRAE Standard 189.1-2009 – Part 1**

Mon, April 16, 2012 – 1:00 pm to 4:00 pm ET

**Implementing ASHRAE Standard 189.1-2009 – Part 2**

Thurs, April 19, 2012 – 1:00 pm to 4:00 pm ET

**Integrated Building Design – Part 1**

Mon, April 23, 2012 – 1:00 pm to 4:00 pm ET

**Integrated Building Design – Part 2**

Wed, April 25, 2012 – 1:00 pm to 4:00 pm ET

## ASHRAE HVAC Design Workshops

2 Workshops, 5 Days of Intense Instruction

May 21-25, 2012 • ASHRAE Foundation Learning Center • Atlanta, GA

**HVAC Design: Level I – Essentials**

May 21-23, 2012

ASHRAE's HVAC Design: Level I - Essentials workshop provides intensive, practical education for designers and others involved in delivery of HVAC services. Developed by industry-leading professionals, the workshop provides participants with training design to accelerate their evolution into effective member on a design, construction or facilities maintenance team. Gain the fundamentals and technical aspects to design, install and maintain HVAC systems.

**HVAC Design: Level II – Applications**

May 24-25, 2012

ASHRAE's HVAC Design: Level II - Applications workshop provides advanced instruction on HVAC system designs for experienced HVAC designers or those who completed the HVAC Design: Level I Essentials workshop. Gain an understanding of system design incorporating the application of Standards 55, 62.1, 90.1 and 189.1.

**Creating Effective, Highly Skilled Engineering Team Members**

- Gain knowledge to make immediate contributions to design projects
- Participate in in-depth, practice-focused training
- Learn from industry leaders selected by ASHRAE
- Receive free bonus resources valued at over \$200



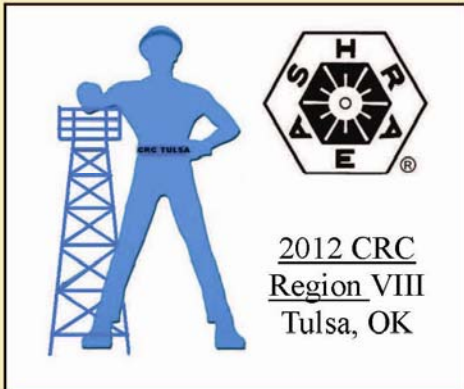
Attendees of the HVAC Design Workshops can earn continuing education credits. Contact the relevant governing body for more information.

Visit [www.ashrae.org/hvacdesign](http://www.ashrae.org/hvacdesign) to register

### ASHRAE Certification Programs

- Building Energy Assessment Professional (BEAP)
- Building Energy Modeling Professional (BEMP)
- Commissioning Process Management Professional (CPMP)
- Healthcare Facility Design Professional (HFDP)
- High-Performance Building Design Professional (HBDP)
- Operations & Performance Management Professional (OPMP)

For more info, visit  
[www.ashrae.org/certification](http://www.ashrae.org/certification)



2012 ASHRAE  
Region VIII CRC  
April 26th—28th, 2012  
Tulsa, Oklahoma  
DoubleTree @ Warren Place

The NEOK Chapter is looking forward to hosting the Region VIII CRC in 2012. It will be April 26th –28th at the beautiful suburban DoubleTree @ Warren Place.

Registration website will open in January. So watch your inbox and chapter newsletter for more information.

In addition to the regional training and business sessions, we have planned some great Technical Sessions for Friday afternoon.

- 2:00 PM Speaker: David Farthing**  
Adjunct Professor at Oklahoma State University  
**Topic: Controlling NO<sub>x</sub> Emissions from Boilers**
- 3:30 PM Speaker: Dave Knebel,**  
Vice-President of Sales and Technology at AAON, Inc.  
**Topic: Single Zone VAV Systems**

PDH's will be provided

**2012 CRC TENTATIVE AGENDA**

**Wednesday, April 25, 2012**

4:00 PM – 7:00 PM Registration

3:30 PM – 5:00 PM Single Zone VAV Systems  
 6:00 PM – 9:00 PM Friday Night Social-Tulsa Air & Space Museum

**Thursday, April 26, 2012**

7:00 AM – 7:30 PM Registration  
 7:00 AM – 9:00 AM Breakfast – Hospitality Lounge  
 8:30 AM Golfers meet in Hospitality Lounge  
 9:00 AM La Fortune Golf Course  
 4:00 PM – 5:00 PM Caucus Orientation  
 6:00 PM – 9:00 PM Welcome Party-Hotel

**Saturday, April 28, 2012**

7:00 AM – 9:00 AM Breakfast- Hospitality Lounge  
 7:30 AM – 12:00 PM Registration  
 8:00 AM – 11:45 AM Golden Gavel Committee  
 8:00 AM – 9:45 AM Webmaster Workshop  
 8:00 AM – 9:45 AM Officers Workshop  
 8:00 AM – 9:45 AM Research Promotion Workshop  
 8:00 AM – 9:45 AM Communications Judging  
 8:00 AM – 9:45 AM Historian Workshop  
 9:45 AM – 10:00 AM Break  
 10:00 AM – 11:45 AM CTTC Workshop  
 10:00 AM – 11:45 AM Student Activities Workshop  
 10:00 AM – 11:45 AM Communications Workshop  
 10:00 AM – 11:45 AM Membership Workshop  
 10:00 AM – 11:45 AM Refrigeration Workshop  
 12:00 PM – 1:45 PM Awards Luncheon  
 2:00 PM – 3:30 PM Business Meeting  
 3:30 PM – 5:00 PM Executive Session  
 5:00 PM – 5:45 PM CRC Debrief

**Friday, April 27, 2012**

6:30 AM – 5:00 PM Registration  
 6:45 AM – 7:45 AM Caucus Breakfast  
 7:00 AM – 9:00 AM Breakfast-Hospitality Room  
 8:00 AM – 11:45 AM Business meeting  
 10:00 AM – 10:15 AM Break during Business Meeting  
 12:00 PM – 1:45 PM President’s Luncheon  
 2:00 PM – 5:00 PM Technical Sessions  
 2:00 PM – 3:20 PM Commissioning in the LEED Environment

**COMPANION ACTIVITIES**

**Thursday, April 26**

7:00 AM-9:00 AM Continental Breakfast-Hospitality Room  
 6:00 PM-9:00 PM Welcome Party at Hotel

**Friday, April 27**

7:00 AM-9:00 AM Continental Breakfast-Hospitality Room  
 10:30 AM Leave for Philbrook Museum  
 11:00 AM-1:30 PM Tour and lunch at Philbrook  
 1:30 PM-2:30 PM Tour of Gardens at Philbrook  
 2:30 PM-4:00 PM Shopping at Utica Square  
 6:00 PM-9:00 PM Social at Tulsa Air & Space Museum

**Saturday, April 28**

7:00 AM-9:00 AM Continental Breakfast-Hospitality Room  
 10:00 AM-11:00 AM Optional Exercise/Walking Class by Fleet Feet  
 12:00 PM-1:45 PM Awards Luncheon

## Best Practices to Improve Building Performance Focus of ASHRAE High Performing Building Conference

The engineering, architectural and green building communities, as well as governmental agencies, are seeking to fundamentally change energy-use aspects of the built environment. The ASHRAE conference, High Performance Buildings: A Focus on Deep Energy Savings, addresses what really works when tackling major improvements in energy efficiency, renewable applications and operating practices in buildings.

The conference is sponsored by ASHRAE's High Performing Buildings magazine and takes place March 12-13, 2012 in San Diego, Calif.

"The conference's focus on case studies and networking offers attendees an up close and personal exchange of ideas on best practices for high performance buildings," Kent Peterson, conference chair, said. "It's an intense two days of examining what has and hasn't worked in the past, what we're doing right now and what we can do in the future to ensure that 'high performance' is the obvious choice when it comes to design and construction."

The full technical program offers more than 50 presentations in 16 sessions on topics such as applications results; energy audits; commissioning; benchmarking of utility consumption; economics, design and construction; energy efficient IEQ strategies and technologies; and energy efficiency strategies for envelopes and lighting.

Particular sessions of interest include "U.S. Army Net Zero Policy, Initiatives and Progress," presented on March 12, by Katherine Hammack, Assistant Secretary of the Army (installations, energy & environment). The Army is the largest facility energy user in the federal government, with an energy bill that exceeded \$1.2 billion in FY10. A recent initiative by the Army has announced 17 installations that will participate in a pilot project to achieve net zero by 2020 in one of four categories: energy, water, waste or all three.

Additionally, "Life-Cycle Commissioning: Maximizing Investment in Construction, Operation and Maintenance," on March 13, addresses the importance commissioning throughout the entire life-cycle of a building, versus new building or retro-commissioning alone. Life-cycle commissioning maximizes the capital, operating and strategic investments in facilities and a necessary evolution for an efficient building.

Jeanne Clinton, special adviser to the Governor for Energy Efficiency, presents a keynote speech on "Energy Management Meets Economic Development." Other keynote speeches are presented by ASHRAE President Ron Jarnagin and Eric Corey Freed, who will speak on "Dodo-Sapiens: How Our Way of Life Is Killing Us and the Need for Regenerative, Bio-Based Buildings." The conference also includes a presentation on this topic by Douglas Pierce.

In conjunction with the conference, ASHRAE Learning Institute is offering the Implementing Standard 189.1-2009 for High-Performance Green Buildings seminar. Presented by Tom Lawrence, a professor at the University of Georgia, this six-hour seminar focuses on the minimum requirements for the design, construction and plans for operating high-performance buildings. The seminar takes place on March 11, and the cost is \$485 (\$395 ASHRAE, USGBC and AIA members).

## Best Practices to Improve Building Performance Focus of ASHRAE High Performing Building Conference (cont.)

Cost of registration for the conference is \$650, non-member (\$550 ASHRAE, USGBC and AIA members). The conference will be approved for AIA LUs, NY PDHs and GBCI credits for LEED APs. An “on-demand” virtual conference is included with the registration fee. A Virtual Conference only registration is \$149 (\$99, member). Registration is limited to 300 attendees. To register or for more information, go to [www.ashrae.org/HPBConference](http://www.ashrae.org/HPBConference).

## 2011 Version of the Green Standard Now Available from ASHRAE, USGNC, IES

Changes to help make buildings and systems more sustainable are part of the newly published version of the high performance green building standard from ASHRAE, the U.S. Green Building Council (USGBC) and the Illuminating Engineering Society (IES)

ANSI/ASHRAE/USGBC/IES Standard 189.1-2011, Standard for the Design of High-Performance, Green Buildings Except Low-Rise Residential Buildings, provides a green building foundation for those who strive to design, build and operate high performance buildings. It covers key topic areas of site sustainability, water-use efficiency, energy efficiency, indoor environmental quality and the building’s impact on the atmosphere, materials and resources. When first introduced in 2009, the standard was the first code-intended commercial green building standard in the United States.

“Since Standard 189.1 was first published, we have received much input from the industry offering suggestions on how to strengthen it in all areas,” chair Dennis Stanke said. “This 2011 version incorporates much of that input. More importantly, the 2011 version incorporates updated connections to its referenced standards – primarily ANSI/ASHRAE/IES 90.1-2010 and ANSI/ASHRAE 62.1-2010. Compliance with these updated provisions will result in further improvements to indoor environmental quality, while further reducing energy use and environmental impact through high-performance building design, construction and operation.”

The most significant change in energy-related provisions results from new requirements in ANSI/ASHRAE/IES Standard 90.1-2010, Energy Standard for Buildings Except Low-Rise Residential Buildings, adding to and superseding requirements in the 2007 version. In October 2011, the U.S. Department of Energy found that the 2010 version of Standard 90.1 contains significant energy savings over the 2007 standard. The energy savings in the Standard 90.1-2010 provisions also result in energy savings for building projects complying with Standard 189.1, according to Stanke.

In addition, mandatory and prescriptive renewable energy requirements were clarified to reduce confusion and simplify calculations; now both mandatory provisions to prepare for on-site renewable energy and provisions to produce prescribed levels of renewable energy must be met. Additionally, buildings that meet the prescriptive requirement for renewable energy production are now deemed to comply with the mandatory requirement for renewable energy site-preparation.

The standard also updates the performance option for energy efficiency (Appendix D) so that it refers to Appendix G of Standard 90.1-2010, which is now a normative appendix. Appendix G of 90.1 applies to projects seeking to reduce annual energy cost more than would be possible by merely meeting the requirements of that standard. Appendix D in Standard 189.1, on the other hand, provides a performance option for compliance as an alternative to the less-complex prescriptive option; it must show that the project design results in annual energy cost equal to or less than would be possible by meeting the mandatory plus prescriptive requirements of the standard, according to Stanke.

## 2011 Version of the Green Standard Now Available from ASHRAE, USGNC, IES (cont.)

Additional changes to the 2011 standard include:

- More stringent Lighting Power Density allowances due to the change in reference to Standard 90.1-2010. Both interior and exterior values are now set as a percentage of the Standard 90.1 allowances, based on building, space or area type.
- Automatic controls are now required for lighted signs visible during daytime hours; controls must reduce the lighting power to 35 percent of full power. For other outdoor signs, automatic controls must now turn off lighting during daytime hours and reduce the lighting power to 70 percent of full power after midnight.
- Open-graded (uniformed size) aggregate and porous pavers (e.g., open-grid pavers) qualify as a hardscape surface for heat island mitigation with no further testing. Permeable pavement and permeable pavers must meet a minimum percolation rate rather than a minimum solar reflectance index (SRI).

Standard 189.1 is currently a jurisdictional compliance option in the International Green Construction Code developed by the International Code Council, ASTM International and the American Institute of Architects.

The cost of ANSI/ASHRAE/USGBC/IES Standard 189.1-2011, Standard for the Design of High-Performance, Green Buildings Except Low-Rise Residential Buildings, \$119 (\$99 ASHRAE members).

To order, contact ASHRAE Customer Contact Center at 1-800-527-4723 (United States and Canada) or 404-636-8400 (worldwide), fax 404-321-5478, or visit [www.ashrae.org/bookstore](http://www.ashrae.org/bookstore).

## ASHRAE, IAPMO Sign MOU to Advance Built Environment Codes and Standards

ASHRAE and the International Association of Plumbing and Mechanical Officials (IAPMO) have entered into a Memorandum of Understanding (MOU) specifically detailing ways in which the two organizations can work together to advance and promote mutual interests in built environment codes and standards.

The MOU was signed during ASHRAE's 2012 Winter Conference held this week in Chicago.

"With ASHRAE's expertise in HVAC&R engineering, and IAPMO's expertise in plumbing and mechanical codes, our joint efforts will ensure that the design, construction, reconstruction and operation of buildings meet the built environment needs in codes and standards," ASHRAE President Ron Jarnagin said.

"IAPMO and ASHRAE enjoy a long history of working together in the interests of promoting health, safety and sustainability through the codes and standards that govern mechanical systems," said IAPMO President Dan Daniels. "I am pleased that this MOU will ensure our two organizations continue to strengthen each other and subsequently strengthen our industry."

"IAPMO is delighted to be working more closely with ASHRAE in our efforts to promote our standards and services throughout the world," said IAPMO CEO GP Russ Chaney. "This MOU provides both organizations with the basis to expand our already close and mutually beneficial relationship as we continue to collaborate together."

The MOU outlines several areas in which ASHRAE and IAPMO will work together, including:

- Collaborating on common public affairs goals, such as joint promotion of codes and standards at the local, state and federal levels; and promotion of mutually beneficial positions during the development and passage of state and federal legislation.
- Exploring opportunities to co-develop new courses or other training programs that take advantage of overlapping and complementary expertise.
- Fostering technical cooperation in areas of common interest by providing opportunities to participate in and comment on proposed standards, guidelines, policies and position statements developed on technical subjects as they relate to buildings and community developments; exploring ways to use ASHRAE standards in IAPMO codes, including derivative documents developed for use outside the U.S.; and investigating the feasibility of creating a coalition of U.S. codes and standard organizations to promote the international use of standards and codes developed by coalition participants.
- Promoting research in areas where research results will add to the body of knowledge in codes and standards.
- Disseminating research results quickly, focusing on high-impact findings.
- Identifying opportunities for research funding from other sources

## Chapter Officers and Committee Chairs

### Officers

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