

## Chapter Meeting October 14, 2015

### Time:

9:45 a.m. Tech Session Registration Begins

10:00 - 11:00 a.m. Tech Session

11:00 a.m. Lunch Meeting Registration Begins

11:30 - 1:00 p.m. Lunch Meeting

### Location:

Maggiano's North Park  
8687 N. Central Expressway  
Dallas, TX 75225

**Lunch Session Topic:**  
IAQ and Air Purification Systems

### Presenter:

Doug Crooks

**Tech Session Topic:**  
Details and Differences of the  
VRP and IAQP methods

### Presenter:

Doug Crooks

Letters to the Editor should be sent  
via e-mail to [csims@sim seng.com](mailto:csims@sim seng.com)

## Message From the President



Welcome to the exciting ASHRAE 2015-2016 year! If you missed the first meeting, don't worry, there are still 8 more meetings left and plenty of other activities planned for the year. As always, the most current information is normally found on our website at [www.dallas-ashrae.org](http://www.dallas-ashrae.org). This should be the first place most of you should go if you want information. There are many great resources and links on our website (newsletters, events, links to job postings on society's website, etc). All of our meetings this year are on the second Wednesday of the month at Maggiano's in North Park Mall. You can download an invite from our website to put a placeholder in your calendar.

The presidential theme of our current society president, David Underwood, is making connections. He wants to connect to our industry, communities, governments, and to the public. I, too, have a similar theme in which I want to connect our chapter members to society. There are many opportunities to be involved and to share any great ideas you may have. Technical committees (TC) are a fantastic first step. Joining a technical committee is easier than ever now that signing up is available online. You just need to go to the following link and fill out the form and you are instantly added as a provisional corresponding member (meaning you aren't a full member, yet, and are on a probation period). With more involvement and interest, you become a member, then voting member, and maybe even chair of the committee one day. These committees are the starting point in developing the codes and standards we all use in our industry. If you are interested in sharing your ideas and giving valuable input, please click the link to [join a TC](#).

Lastly, as ASHRAE members and part of one of the largest (and smartest!) chapters in the region, I feel it is our obligation to share our knowledge with ASHRAE by providing comments to proposed changes of standards. There is an online database that you can freely give input on whether or not you agree with a proposed change and help develop the standard without being directly involved with any one committee. I hear quite often from many different members that they don't agree with certain portions of the standards, there is an error in the standard, or they wish there was something else in the standard to make their life easier. Well, now is your chance to make a difference. Visit [this link](#) to login to your ASHRAE account and you can see all of the standards out for public review. If you have questions on how to make your comments, please don't hesitate to reach out to me.

Overall, I am excited for the opportunity to be the Dallas ASHRAE president and I hope to serve each of you to the best of my ability. I want to help connect the Dallas chapter members to society and be the influential chapter I know we can be. There are a lot of great ideas in the Dallas area that our members have but the key is getting those ideas out of Dallas. I look forward to an exciting society year!

Sincerely,

Brandon Damas  
ASHRAE Dallas Chapter President



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## ASHRAE Dallas Chapter - Program Organizer Year 2015-2016

Date	Session	Program / Technical Session		
		Speaker	Company	Topic
9/9	Main Program	Doug Crooks	CosaTron	IAQ and Air Purification Systems
	Tech Session	Doug Crooks	CosaTron	Details and Differences of the VRP and IAQP Methods
10/14	Main Program	Brian Poitte	Xylem	Pressure Independent Control Valve Applications
	Tech Session			
11/11	Main Program	Paul Easum/Jeff Keene	Delta T	HVAC Testing and Balancing
	Tech Session	Paul Easum/Jeff Keene	Delta T	TBD
12/9	Main Program	Todd Thompson	Yaskawa	VFD Applications
	Tech Session	Todd Thompson	Yaskawa	TBD
1/13	Main Program	TBD	TBD	Ethics
	Tech Session	TBD	TBD	ASHRAE Code of Ethics
2/10	Main Program	TBD	TBD	Energy Code or Construction Law
	Tech Session	TBD	TBD	TDLR Elevator Code (updates)
3/9	Main Program	Dennis Stanke	ASHRAE Distinguished Lecturer	ASHRAE 189.1 IgCC
	Tech Session	Dennis Stanke	ASHRAE Distinguished Lecturer	Standard 189.1 Overview for HVAC Designers
4/13	Main Program	TBD	TBD	VRF Update
	Tech Session	TBD	TBD	TBD
5/11	Main Program	TBD	TBD	Low GWP/ODP refrigerants
	Tech Session	TBD	TBD	TBD



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## Membership Update



Dallas ASHRAE membership is strong! This year's goal is to increase membership by 2%. We currently have 700 members. We have added a net of 3 new members to our chapter only one month in to the ASHRAE year! I would like to encourage each of our active members to recruit new members. You would be shocked to know that people in your office who you thought were members and actually aren't (I know I was). We would like to welcome this year's new members:

Anastasia Novikova  
Vrunda Patel  
John Holman  
Mathew Manske  
Justin Parmer  
William Streefkerk  
Sean Hall  
Ben Bell

Please be sure to say hello and welcome to these new members when you see them. Membership promotion month this year is December. We will have more information to come on the activities.

Also another membership goal this year for our chapter is to upgrade our membership. Our chapter has several affiliate and associate members that are eligible for their FULL membership. The chapter receives points for each one of our members upgrades their membership. The requirements for being a full member are 12 years involvement. What counts toward those 12 years? I'm glad you asked. Each year that you have been working in the industry and each year of higher education / technical training counts toward the 12 years. Being a full member is an honor/achievement that doesn't cost you any more than associate/affiliate membership and qualifies you for ASHRAE awards/honors. Also, by becoming a full member, you are able to hold a position at the region and society levels of ASHRAE. While that might not interest you now, you never know what you will want to do in the future. Don't limit yourself and upgrade your membership when you are eligible to do so.

Trey Newcomb  
ASHRAE Dallas Membership Promotions Chair



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## Student Activities Update



For those of you that may be new to the chapter, my name is Micheal Schackelford and I am the Student Activities chair for the Dallas Chapter of ASHRAE. My focus is as it has always been, to involve young engineers and students in the HVAC community. ASHRAE provides a unique platform / opportunity for me to do this. I am currently working in industry as a mechanical designer and I look forward to many challenges and successes as I progress professionally in my career. I hope to use my experience in leadership roles, event planning, community organization, and professional communication to support all of our local student chapters in being involved with Dallas ASHRAE and its many events. I'm really looking forward to this upcoming year as we have some exciting things happening with student activities.

This year we have some new additions to the Student Activities committee to help provide support throughout the year. Hooman Daneshmand, PE, CEM, MBA will be helping with the student activities by presenting informational technical sessions to both established student chapters, as well as unestablished student chapters, with the intent to garnish support, and motivate organizational participation. His role this year has been extremely helpful in gaining ground toward establishing a student chapter at the University of Dallas. He has extensive experience in fluid controls and hydronic systems and their many applications. Hooman takes a special interest in mentorship and training. He is currently operating his evaporative cooling business with intentions to patent his ideas while remaining dedicated to helping students recognize and achieve their maximum potential.

Over the course of the summer, we have continued to work closely with the University of North Texas. Several events have been planned with guest speakers to speak to young engineering students and help educate them on expected roles and possible responsibilities they could expect upon entry into any number of careers within the HVAC community. Other presentations include such topics as hydronics 101, geothermal heating and cooling, and direct expansion system selection criteria. Meetings with faculty over at the University of Dallas have been setup in attempts to establish a faculty advisor to help support student interests in ASHRAE. Anyone interested in giving a presentation to a group of college students regarding your field of expertise please email me the topic and dates you are available as I am constantly looking for quality presenters to speak at universities across the DFW area.

I am sure that many of you remember our scholarship recipient from last year, Robyn Boling. Robyn, who was awarded a \$2000 scholarship, is currently attending UNT and working on her master's degree. Since our last newsletter update Robyn, acting as the standing UNT student ASHRAE chapter president, has continued her support of the UNT ASHRAE chapter by appointing a UNT BOG and holding regular planning meetings to help coordinate student activities and industry supported presentations. Her B.O.G. includes; Pooya Sharifani, and Don Magedara. Together they have been planning on increasing recruiting to ensure future UNT ASHRAE involvement. She hosted her first UNT ASHRAE projectile launching competition during E-week last year and will host another this upcoming February. She remains dedicated to the amelioration of ASHRAE and its continued involvement in sustaining a presence in academia with the intention of getting young engineers involved in the industry. Keep up the great work Robyn!

We are beginning our yearly search for scholarship candidates and are now accepting scholarship applications for the Dallas Chapter of ASHRAE. The deadline for applying to scholarships is March 1, 2015. If you know of any local engineering students that may be interested, please direct them to our Dallas Chapter website, <http://dallas-ashrae.org/resources/ashrae-scholarships/>, where the most up to date information and applications are available.

A big thanks to Mark and Ermas with Accurex , as the monthly YEA Happy hour that was held on Wednesday, September 9, 2015 at the British Beverage Co. went splendid and had a very large turnout. This upcoming YEA event will be sponsored by Scotty McLaughlin with Timberlake & Dickson. It will be held at Gordon Beirsch from 5:30 – 7:30 on October 14th. Come on out, and enjoy a couple drinks and good times in support of all the young engineers in ASHRAE. If there is anyone would like to sponsor a YEA event, or has any ideas as to where they would like to see the YEA Happy Hour hosted in the future, please let me know as we are open to suggestions.

In continuing with the organizational tools previously setup by Brandon Scharn a YEA calendar has been developed for this year's upcoming YEA events. Check it often for changes and updates to locations and sponsors to better plan which events you can attend! I am looking forward to this year's YEA events as I hope to have the distinguished opportunity to meet many of you.

As you can see we are off to a great start this year for student activities and we definitely have our work cut out for us. However, with everyone's help I am sure we are going to make this year better than ever.  
Until Next Time...

Micheal Schackelford  
ASHRAE Dallas Student Activities Chair





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## Student Activities/YEA Event Calendar

### Student Activities/YEA Event Calendar

<b>September</b>	<b>9/9 - YEA Happy Hour</b>  <b>Location:</b> BBC (2800 Routh Street, Dallas, TX 75201)  <b>Time:</b> 5:30-7:30 pm  <b>Sponsor:</b> Ermias & Mark (Accurex)
<b>October</b>	<b>10/14 - YEA Happy Hour</b>  <b>Location:</b> Gordon Beirsch (8060 Park Lane, Suite 125 Dallas, TX 75231)  <b>Time:</b> 5:30-7:30 pm  <b>Sponsor:</b> Scotty McLaughlin (Timberlake & Dickson)
<b>November</b>	<b>11/11 - YEA Happy Hour</b>  <b>Location:</b> TBD  <b>Time:</b> 5:30-7:30 pm  <b>Sponsor:</b> TBD
<b>December</b>	<b>12/10 - YEA Happy Hour</b>  <b>Location:</b> NO HAPPY HOUR  <b>Time:</b> N/A  <b>Sponsor:</b> N/A
<b>January</b>	<b>1/13 - YEA Happy Hour</b>  <b>Location:</b> TBD  <b>Time:</b> 5:30-7:30 pm  <b>Sponsor:</b> TBD
<b>February</b>	<b>2/10 - YEA Happy Hour</b>  <b>Location:</b> TBD  <b>Time:</b> 5:30-7:30 pm  <b>Sponsor:</b> TBD
<b>March</b>	<b>3/9 - YEA Happy Hour</b>  <b>Location:</b> TBD  <b>Time:</b> 5:30-7:30 pm  <b>Sponsor:</b> TBD
<b>April</b>	<b>4/13 - YEA Happy Hour</b>  <b>Location:</b> TBD  <b>Time:</b> 5:30-7:30 pm  <b>Sponsor:</b> TBD
<b>May</b>	<b>5/11 - YEA Happy Hour</b>  <b>Location:</b> TBD  <b>Time:</b> 5:30-7:30 pm  <b>Sponsor:</b> TBD



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## Tech Times - When Slab Heaters Fail

By Stuart DeVaney



Hello all. I have not presented a refrigeration article in a while and while thinking of what I wanted to write about, I remembered an interesting problem that I came across last year.

One of the large food distribution/ warehouse companies in North Dallas was decommissioning a large warehouse where they stored frozen foods prior to distribution. They had an issue with the now empty warehouse growing mold up the sides of the structure inside the decommissioned warehouse and wanted to find a way to dry out the area so that the mold growth would stop.

Their problem was that the heating loop under the slab had broken many years prior and the ground under the warehouse was now frozen solid to an unknown depth. The frozen ground caused the slab and the walls to be well below the dew point of the air and thus they were constantly wet and began growing mold.

The company wanted to look at a dehumidification unit to lower the dew point of the air to a point to stop the mold growth and allow the slab to warm up to where dehumidification was no longer required and they could sell or repurpose the building. Due to the warehouse being so large (approx. 200 ft by 400 ft by 40 ft tall), drying the air to a low enough dew point to do any good was past what I could provide and I referred the customer elsewhere.

This did get me thinking of all of the possible variables that it would take to accomplish what they wanted with the main one being, how large of an area of ice is built up under the slab and how long will it take that ground temperature to thaw and come up to an acceptable temperature? Researching this a little I found that when the slab heaters in a freezer fail, not only will the ground freeze, ice in a shape of a lens will also form and build up at the slab. Over time, this lens can become quite large heaving upwards causing foundation and building damage if allowed to go unchecked.

I have attached one article from The Electronic Newsletter of The Industrial Refrigeration Consortium, The Cold Front:

This article gives a great write up on what occurs when slab heaters fail. Please read and enjoy.

Stuart DeVaney  
ASHRAE Dallas Refrigeration Chair





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## History of a Local Engineering Firm

In each newsletter we are highlighting and recognizing a different organization in our industry. This month's newsletter features the history and impact of JJA in the North Texas engineering industry. We would like to continue to showcase the local impact of firms that make up our chapter for next year, and we need your help. Please let us know how we can highlight firms that you might be interested in learning more about. Contact me or any of your ASHRAE Board members for additional details.

-Dan Wine, ASHRAE Dallas Chapter Historian

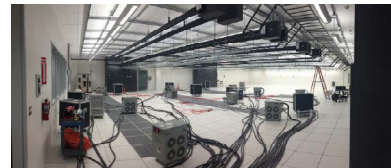


**JJA** Mechanical and Electrical  
Engineering Consultants

JJA, Inc. is a leading Mechanical and Electrical consulting engineering firm established in 1978 in Dallas, Texas providing engineering design of HVAC, Plumbing Fire Suppression, Electrical

Distribution for commercial and Critical Power Systems, Indoor and Outdoor Lighting systems, Life Safety systems, Sustainable Designs, Energy Modeling and MEP System Commissioning.

In 1978 Jim Johnston had a vision to develop a startup engineering firm, James Johnston & Associates Inc., which focused on providing an enhanced quality of engineering design services for the building construction industry.



**SMU Main Campus Commissioning  
Dallas, TX**

Jim Johnston provided a hands-on management approach for projects and clients while taking time from each day to mentor and develop staff. This "teacher" mentality developed many excellent engineers in the mechanical and electrical disciplines of the building construction industry, many who are still employed with us.



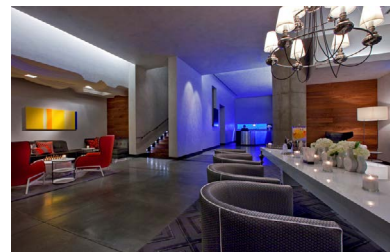
**The Richards Group New  
Corporate Office HQ  
Dallas, TX**

With the inclusion of senior level personnel on each project, the business established a core group of select clients providing repeat design opportunities throughout the Dallas-Fort Worth Metroplex. Continued growth over the past 35 years has help us expand our services, offering clients MEP Engineering specialization across a multitude of market sectors. Today, we do business simply as JJA, Inc., serving local, regional, and national clients.

We are proud of Jim's vision and dedicated effort building JJA and its quality reputation. Jim continues to counsel the firm as an advisor and sounding board for the engineering staff, assuring his vision continues.

JJA holds Professional Engineering registrations in over 30 states and has significant experience in the engineering design, planning, contract administration and commissioning for the following types of projects: Automotive, Corporate, Mission Critical, Corporate Campus, Educational K-12, Higher Education Facilities, Hospitality, Healthcare, Religious Buildings,

MEP Interiors, Justice, Government / Municipal, Retail, Manufacturing & Industrial, and Warehouse & Distribution. Delivery methods include traditional "Plan and Spec" MBE/HUB Alliance, Design/Build and Design/Assist processes utilizing AutoCAD and BIM production.



**W Hotel  
Austin, TX**



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## Noteworthy

### ASHRAE and IBPSA-USA SimBuild 2016 Conference Announced

ATLANTA – ASHRAE and IBPSA-USA have announced a second, co-organized conference that encompasses the ASHRAE Energy Modeling and IBPSA-USA SimBuild Conferences.

The co-organized conference, titled ASHRAE and IBPSA-USA SimBuild 2016: Building Performance Modeling, takes place Aug. 10-12, 2016, Salt Lake City, Utah. There is currently an open call for papers.

"The first jointly organized conference held in 2014 was a huge success in its ability to bring to the building energy analysis and performance simulation community together and provide the conference content to serve attendees," Dennis Knight, Conference chair, said. "The ASHRAE and IBPSA-USA SimBuild 2016 conference seeks to build upon that success and further improve the industry's ability to accurately model building performance."

Modelers, software developers, owners and researchers will address the practices of energy modeling and building performance simulation using existing simulation tools, software development, and future simulation research and applications.

The conference seeks papers on the following topics:

- Energy efficiency
- HVAC component modeling and load analysis
- Urban scale modeling
- Lighting and daylighting
- Combined use of tools
- Co-simulation
- Optimization
- Algorithm advances
- Computational fluid dynamics
- Data exchange and interoperability
- Energy auditing
- Life cycle cost and economic analysis
- Model calibration and validation
- Automation and scripting
- Modeling of tall buildings
- Weather data for modeling
- Occupant comfort
- Heat, air, moisture modeling
- Uncertainty analysis
- Big data applications for large scale simulations
- Reality capture for modeling
- Data visualization and user experience

In addition, papers describing workarounds, case studies, how to's, challenges, barriers and cloud-based solutions are encouraged.

Abstracts (400 or less words in length) are due Oct. 16, 2015. If accepted, papers are due Jan. 15, 2016. The conference papers will be a maximum of eight pages in length.

To submit an abstract or for more information, visit [www.ashrae.org/simbuild2016](http://www.ashrae.org/simbuild2016).

A call for presenters will be announced after the call for papers closes. Invited speakers and keynote speakers will be announced.

The conference will cover two-and-a-half days and will be preceded by two days of training seminars and short courses.

"The conference seeks to keep pace with advances in computing, data and automation as well as to help modelers make better decisions through the application of simulation and modeling over the entire building life cycle," Knight said.





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## Noteworthy

### DOE Releases Common Definition of Zero Energy Buildings, Campuses and Communities; ASHRAE Commends Efforts

WASHINGTON, DC – Today the U.S. Department of Energy (DOE) reached a significant milestone in bringing the building community together by releasing a common definition of a zero energy building, or what is also referred to as a “net zero energy” or “zero net energy” building.

After leading an extensive stakeholder engagement process over the past year and a half, the Energy Department released its findings in the recently published *A Common Definition of Zero Energy Buildings*, which states that a Zero Energy Building is “an energy-efficient building where, on a source energy basis, the actual annual delivered energy is less than or equal to the on-site renewable exported energy.” This definition also applies to campuses, portfolios, and communities. In addition to providing clarity across the industry, this new DOE publication provides important guidelines for measurement and implementation, specifically explaining how to utilize this definition for building projects.

“Reducing energy use in buildings must be a major part of the solution as we work to combat the escalating costs and impacts of climate change,” said Brendan Owens, chief engineer at the U.S. Green Building Council, which represents more than 13,000 member businesses and organizations from across the building community. “While we are making significant progress to save energy in buildings, this Zero Energy Building definition developed by DOE helps increase expectations and orient the buildings industry towards even greater achievements. USGBC applauds DOE’s effort to define zero energy buildings and we look forward to continuing to champion the cause of building efficiency and renewable energy applications to meet the ambitious goals of this definition.”

In collaboration with the National Institute of Building Sciences (NIBS), DOE initiated a process last year to work with a large, diverse set of building industry stakeholders to develop its common definition of what it means to be a zero energy building. Thousands of project teams throughout the country are looking to push the envelope and achieve a zero energy building. In fact, the number of zero energy buildings doubled from 2012 to 2014 across 36 states, according to the New Buildings Institute. The growth of zero energy buildings has highlighted a lack of clarity and consistency across the industry on key definitional issues that increasingly were the source of market confusion, underscoring the need for DOE to help develop a commonly accepted definition and approach.

“NIBS and USDOE have created a set of clear and concise definitions for zero energy buildings that will help to narrow the broad array of terminology currently used in the industry,” said Ralph DiNola, CEO of New Buildings Institute. “These consistent definitions will contribute to the growth of zero energy building construction across this country. NBI supports the definitions as a federal position and will promote this effort through the work we do leading programs, practices and policies to get to zero across North America.”

Generally speaking, a zero energy building produces enough renewable energy to meet its own annual energy consumption requirements, thereby reducing the use of non-renewable energy in the building sector. There are a number of long-term advantages of buildings meeting this goal, including lower environmental impacts, lower operating and maintenance costs, better resilience to power outages and natural disasters, and improved energy security.

“We applaud the Department of Energy’s continuing work to promote buildings that use less energy. For more than 150 years, AIA-member architects have worked to advance our quality of life through design,” said Elizabeth Chu Richter, FAIA, president of the American Institute of Architects (AIA). “From designing the next generation of energy-saving buildings to making our communities healthier and more vibrant, the 86,000 members of the AIA shape our future through their work. The quality of this future is wholly dependent on sustainable, resilient buildings that reduce the nation’s reliance on non-renewable energy sources. That is why the Department of Energy’s work is vitally important to the industry and nation as a whole.”

Reducing building energy consumption in new building construction or renovation can be accomplished through various means, including integrated design, energy efficiency retrofits, reduced plug loads and energy conservation programs. Reduced energy consumption makes it simpler and less expensive to meet the building’s energy needs with renewable sources of energy. By clarifying what it means to be a zero energy building, this definition will help more building owners determine if developing a zero energy building is right for them. By creating this common definition for zero energy buildings, building owners and project teams can now better focus their effort on implementing strategies to improve the performance of their buildings.

“The National Association of State Energy Officials (NASEO) commends the Department for taking this critically important step to help define Zero Net Energy,” said David Terry, executive director of National Association of State Energy Officials (NASEO). “For too long, uncertainty in the market place around this issue has been a barrier to many private and state efforts in the move toward Zero Net Energy buildings. This action supports existing state energy office efforts which have resulted in Zero Net Energy schools in Kentucky, state office buildings in Iowa, and new homes in many states. Providing standard definitions will help states and private sector partners expand the pace of Zero Net Energy construction.”

“IBPSA-USA welcomes the development of this industry-standard definition for zero energy buildings,” said Mike Wilson, Executive Director of IBPSA, the US Affiliate of the International Building Performance and Simulation Association. “We intend to promote the use of this definition by IBPSA-USA members, who play a vital role in the development of successful zero energy buildings through the application of building performance simulation.”

“For one hundred and twenty one years ASHRAE has been a national and global leader in standards development that fulfills our mission of serving humanity and promoting a sustainable world. We commend the Department of Energy on its efforts to seek consensus on the issue of energy efficiency in the built environment,” says David Underwood, president of ASHRAE. “The 53,000 world-wide members of ASHRAE have diverse interests in how to approach Zero Energy Buildings but all share a desire to move this goal forward. This definition of Zero Energy Buildings will certainly become one of the tools used by the world-wide marketplace to move towards a sustainable future.”

The Zero Energy Building Definition can be viewed here: <http://energy.gov/eere/buildings/downloads/common-definition-zero-energy-buildings>.



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## Noteworthy

### Compliance Path based on Use of Filtered Recirculated Air Proposed for ASHRAE Residential IAQ Standard

ATLANTA – A new optional credit for improving filtration combined with ensuring sufficient air flow through filters is being proposed for ASHRAE's residential indoor air quality standard.

ANSI/ASHRAE Standard 62.2-2013, *Ventilation and Acceptable Indoor Air Quality in Residential Buildings*, is the only nationally recognized indoor air quality standard developed solely for residences. It defines the roles of and minimum requirements for mechanical and natural ventilation systems and the building envelope intended to provide acceptable indoor air quality in residential buildings.

Eight proposed addenda to Standard 62.2-2013 are currently open for public comment. To comment or learn more, visit [www.ashrae.org/publicreviews](http://www.ashrae.org/publicreviews).

Among them is addendum *k*, which is open for public comment until Oct. 4, 2015. The addendum would create a compliance path based on the use of recirculated air that has been filtered to reduce exposure in the building interior to particulate matter not exceeding 2.5 microns.

"These particles (PM<sub>2.5</sub>) have been found to be one of the most important indoor contaminants from a health perspective," Paul Francisco, 62.2 committee chair, said. "This change would provide an optional credit for having improved filtration combined with ensuring that sufficient air flowed through the filter. This would be the first time the standard has focused on a specific contaminant."

In addition, addendum *v* is open for public review until Oct. 19. The addendum sets out requirements for non-continuous ventilation. Whereas the standard has included an option for intermittent ventilation, this proposed change provides calculation procedures for a broader range of potential operation schedules. It also contains a limit on how much contaminants can increase over a short term due to non-continuous operation to ensure this type of operation does not result in periodic excessive contaminant levels, according to Francisco.

Other addenda are scheduled for review until October 4, 2015 are:

- Addendum *o*. The committee approved a proposal to change references to "whole-building" or "whole-house" ventilation to "dwelling unit" ventilation in the main body of the standard. This proposed change ensures consistency in Normative Appendix A (Existing Buildings).
- Addendum *p* would clarify the requirement in Section 7.2.2 (Demand-Controlled Local Exhaust Fans) that fans have at least one speed setting meeting the minimum required exhaust airflow rate where the corresponding sone rating is 3 or less. Currently, the language in this section would permit any fan with a high speed setting exceeding 400 cfm to be exempt from the sone requirement, even if operating on a lower speed setting. Closing this loop hole will ensure that occupants that have typical sized range hoods will have at least one speed setting rated  $\leq 3$  sone.
- Addendum *q* adds an alternative combustion safety testing method based on performance in lieu of the prescriptive requirements that were the sole basis previously.
- Addendum *r* would provide guidance on this topic while aligning the language with the latest draft of BSR/RESNET/ICC 380, "Standard for Testing Airtightness of Building Enclosures, Airtightness of Heating and Cooling Air Distribution Systems, and Airflow of Mechanical Ventilation Systems."
- Addendum *s* provides a mechanism for accounting for the differences between balanced and unbalanced ventilation. Standard 62.2 has not previously distinguished between balanced and unbalanced ventilation, despite it being well-known that these interact with natural infiltration in different ways to produce different overall air exchange rates.
- Addendum *u* adds an alternative method to reduce transfer air in existing buildings. The compartmentalization requirement in the existing standard is extremely difficult and cost-prohibitive to meet for many existing buildings. While this is a desirable target, an alternative for existing buildings to meet the standard with reasonable effort is needed.





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## Noteworthy

### Lighting, Climate Zone Changes Proposed for ASHRAE/IES Energy Standard

ATLANTA – Changes regarding lighting and climate zones are being proposed to the energy standard published by ASHRAE and the Illuminating Engineering Society (IES). Twenty-three addenda to ANSI/ASHRAE/IES Standard 90.1-2013, *Energy Standard for Buildings Except Low-Rise Residential Buildings*, are open for public comment starting Sept. 4, 2015. To comment or learn more, visit [www.ashrae.org/publicreviews](http://www.ashrae.org/publicreviews). Among the addenda open for public comment is addendum *ch*, which proposes a new set of interior lighting power densities (LPD) limits for both building area and space by space compliance paths. These new LPD limits stems from inclusion of light emitting diode (LED) technology into the space type models that are used to determine appropriate LPD limits for compliance with the standard, according to Eric Richman, chair of the standard's lighting subcommittee.

These LPD limits (watts per square foot) are calculated using IES formulas that relate lighting energy use to lighting quantity based on the application of appropriate lighting technologies into individual space models. These models incorporate efficient cost-effective lighting technology, appropriate light loss factors, and current design practice that incorporate quality design elements. The new LPD values are generally lower by sometimes small to often significant amounts. The magnitude of the change is based primarily on the amount of LED technology incorporated into the model.

"These proposed changes have been under consideration within the 90.1 Lighting Subcommittee for several years," Richman said. "Inclusion of LEDs were seriously considered for the 2013 version of the standard. However, at the time the changes needed to be processed (late 2012), the cost of LEDs was still relatively high and the variety and depth of available products was not deemed sufficient to incorporate into a mandatory code. We understand that LED technology continues to improve and become even more cost-effective such that by the time these new requirements are required for building projects, their effectiveness and viability on code compliance will be even easier."

Also open for public comment is addendum *br*, which was developed in response to the publication of ANSI/ASHRAE Standard 169-2013, *Climatic Data for Building Design Standards*. Standard 169 includes more-recent weather data (resulting in changes in climate zone assignments for some locations, including approximately 10 percent of the 3,000 counties in the United States) and the creation of a new Climate Zone 0. The proposed addendum adds requirements for mechanical provisions.

Under addendum *w*, which is expected to be published in 90.1-2016, Standard 169 is referenced for climatic data (though a new Reference Standard Reproduction Annex in Standard 90.1 includes extracts from Standard 169). Addendum *w* proposed criteria for Climate Zone 0 in Standard 90.1 for envelope provisions. Addendum *br* covers criteria for Climate Zone 0 of Section 6 (HVAC), and for the mechanical systems portions Appendix C and G.

Generally, the new Climate Zone 0 is the hotter portion of the previous Climate Zone 1, which was the warmest climate zone. Cities in Climate Zone 0 include Mumbai (Bombay), Jakarta and Abu Dhabi. There are no cities in the United States in Climate Zone 0; Miami and the islands of Hawaii are in Climate Zone 1. The separation of Climate Zones 0 and 1 allows separate criteria for Standard 90.1 to be developed that are more specific to the hotter regions of Climate Zone 0.

Addenda open for public comment from Sept. 4 until Oct. 4, 2015, are :

- *bt* updates efficiency values for low-voltage dry-type transformers to be consistent with federal law.
- *bx* requires a modeler to use the design set point for multi-zone thermostat systems..
- *bv* exempts baselines with purchased cooling and heat from the reset control requirements in Appendix G.
- *bw* provides a baseline for lighting controls consistent with addendum *bm*.
- *bz* to replaces Table 6.8.1-11 to account for the new rating conditions.
- *by* requires pipe insulation on the first 8 feet of branch piping.
- *cb* updates duct insulation requirements.
- *ca* modifies the fan power criteria by lowering of the motor power threshold for the fan speed control requirement.
- *ce* increases the minimum ERV requirements from zero to a reasonable minimum size for smaller units.
- *cc* replaces the definition of sidelighting effective aperture that was inadvertently deleted in 90.1-2013.
- *cf* to adds additional requirements to section 6.1.1.3.1 for direct replacement HVAC equipment.
- *ci* adjusts the equations for fenestration orientation in Section 5.5.4.5 by requiring a lower solar heat gain coefficient (SHGC) for west and east facing fenestration, and by allowing the use combinations of fenestration area, exterior shading and SHGC to demonstrate compliance.
- *ck* makes a change to control set point for the cooling tower to better scale with its climate, clarifies the operation of the condenser water pump as a constant volume pump, and modifies the exception for pump W/gpm for water side economizer.
- *cj* modifies a footnote in Appendix G for single zone variable air volume systems serving computer rooms.
- *du* requires water-side economizers for non-fan chilled water systems such as radiant cooling or passive chilled beam systems and for active chilled beam systems.

In addition, seven addenda are open for public comment from Sept. 4 until Oct. 19, 2015. They are:

- *ai* includes revisions to the fenestration criteria including U-factors and SHGC in certain climate zones.
- *br* was developed in response to the update of Standard 169-2013, *Climatic Data for Building Design Standards*.
- *bs* updates the EER values for water-source variable refrigerant flow products above 65,000 Btu/h. The proposal also establishes for the first time minimum IEER values for this product class.
- *cd* establishes for the first time a product class for dedicated outdoor air systems.
- *cg* modifies the exterior LPD for building exteriors.
- *ch* modifies the LPD for both space by space and building area methods by including LED technology into the lighting systems.
- *cl* relocates Table 7.8 for minimum efficiency requirements for residential water heaters and pool heaters to an informative appendix.



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## Noteworthy

### Sun, Fun, ASHRAE and AHR Expo: Registration Open for 2016 Winter Conference in Orlando

ATLANTA – New technical program tracks, more than 200 Professional Development Hour opportunities and the world's largest HVAC&R marketplace are just a few highlights of the ASHRAE 2016 Winter Conference and AHR Expo taking place in Orlando, Fla.

The two events are expected to draw thousands of industry professionals from around the world. The ASHRAE Conference takes place Jan. 23-27, Orlando Hilton, while the ASHRAE co-sponsored AHR Expo takes place Jan. 25-27, next door at the Orange County Convention Center. The venues are located next to each other for easy access.

To register for the ASHRAE Conference, which includes free access to the Expo, visit [www.ashrae.org/orlando](http://www.ashrae.org/orlando). Information about the Expo can be found at [www.ahrexpo.com](http://www.ahrexpo.com).

"As an ASHRAE member for more than 40 years, I look forward to all aspects of the Winter Conference – sharing ideas with attendees, visiting the Expo to see the latest solutions to engineering challenges and attending the sessions and courses," ASHRAE President David Underwood said. "There is no better place than the ASHRAE Conference and AHR Expo to make the connections to ensure a sustainable future, both for you and for our industry."

In keeping with ASHRAE's goal of continuing education, some 200 Professional Development Hours recognized by most U.S. states, AIA LUs and LEED AP credits are available through ASHRAE Learning Institute courses and Technical Program sessions. The Conference and ASHRAE Learning Institute Professional Development Hours are accepted by the state of Florida for maintaining professional engineering registrations.

The Technical Program is expected to feature more than 100 sessions and 300 speakers over eight tracks, which address current trends and technologies in the industry; focus on core tracks, design-build practices and residential systems; and emphasize energy efficiency and sustainability, including current international engineering and construction practices. Tracks are Systems and Equipment, Fundamentals and Applications, Design Build (new), International Design, Standards, Guidelines and Codes, Cutting-Edge Technologies (new), The Great Debate (new) and Modern Residential Systems (new). The full Program will be announced in late September.

Twenty Professional Development Seminars and Short Courses are being offered by the ASHRAE Learning Institute. New courses include Variable Refrigerant Flow System Design & Application, and Evaluation and Control of Legionella in Building Water Systems.

Additionally, ASHRAE offers an onsite administration of all six certifications on Jan. 27: Building Energy Assessment Professional (BEAP), Building Energy Modeling Professional (BEMP), Commissioning Process Management Professional (CPMP), High-Performance Building Design Professional (HBDP), Healthcare Facility Design Professional (HFDP) and Operations & Performance Management Professional (OPMP).

Another Conference highlight is the Technical Tours, which include SeaWorld Antarctica: Empire of the Penguin, Harvest Power's Energy Garden, the University of Central Florida Power Plant and the Florida Solar Energy Center.

The keynote speaker at the opening Plenary Session is Laura Schwartz, the White House Director of Events for the Clinton Administration. In her address, Schwartz discusses how volunteerism can make a difference in your world and in your organization. As Schwartz explains, "volunteer associations and service organizations are instrumental in society because they can often do things more effectively than our government."





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## Noteworthy

### New Residential IAQ Guideline Contains Changes Regarding Use of High Efficiency Filters

ATLANTA – With recent research showing that ultrafine particles are more hazardous to human health than originally thought, higher-efficiency filters should be used, according to the newly published 2015 version of ASHRAE's residential indoor air quality guideline.

Guideline 24-2015, *Ventilation and Indoor Air Quality in Low-Rise Residential Buildings*, provides information on achieving good IAQ that goes beyond the requirements contained in Standard 62.2, *Ventilation and Acceptable Indoor Air Quality in Low-Rise Residential Buildings*, by providing explanatory and educational material not included in the code-intended standard. Guideline 24 is the companion document to Standard 62.2.

"In the 2008 version, we indicated that if a lot of ultrafine particles were expected, higher-efficiency filters should be considered. Period," Paul Francisco, chair of the Guideline 62.2 committee, said. "Now we say a lot more. We cite research that shows that ultrafine particles are a much more significant concern, and we state explicitly that higher-efficiency filters mean MERV 13 or higher."

Rick Karg, a member of the Guideline 24 committee who oversaw the revision of the section, notes that particle filters with minimum efficiency reporting value (MERV) ratings below 6 are poor at filtering out respirable particulates (typically below 2.5 microns), but can do an acceptable job at removing the large visible particles such as fibers, insects, or large dusts or pollens. ANSI/ASHRAE Standard 52.2, *Method of Testing General Ventilation Air-Cleaning Devices for Removal Efficiency by Particle Size*, specifies removal efficiency values for particulate filters.

"Recent research suggests that mass of particles below 2.5 microns (PM<sub>2.5</sub>) may be one of the most significant indoor airborne contaminants in terms of chronic health impact in residences of those that have been well studied," Karg said. "PM<sub>2.5</sub> is also the most straightforward contaminant to remove from indoor environments through filtration. MERV 10 rated filters and higher are preferred for removing smaller airborne allergens and PM<sub>2.5</sub> particles."

As such, Guideline 24 recommends that higher-efficiency (MERV 13 and higher) filters should be considered. Multistage particle filtration (a relatively coarse filter followed by a high-efficiency filter) can help filter out different sized particles without overloading the higher-efficiency filters. When selecting filters, consideration should be given to the effects of the filter's pressure drop on delivered airflow, fan capacity and energy use, according to Karg.

Other significant changes to Guideline 24 are:

- Important new definitions, which align the guideline with Standard 62.2.
- Section 4.3.7 Estimating Health Impacts of Contaminant Exposure. Discusses the new methods for quantifying the impact of contaminant exposure, including Disability Adjusted Life Years (DALY).
- Section 5.4.5 Interplay of Mechanical Ventilation and Infiltration. Addresses the important differences between the manner in which balanced and unbalanced mechanical ventilation impact infiltration (natural air leakage). This difference can significantly impact the total ventilation available (mechanical plus infiltration) in a dwelling.

In addition, several other updates were made. Among these are:

- Tables 4.1, Comparison of Regulations and Guidelines Pertinent to Indoor Environments, and Concentration of Interest for Selected Contaminates. Both of these tables were vetted by a number of experts to bring the data up to date.
- Significant updates and expansion to Sections 7 Moisture; 8.6, Combustion Appliances; 12, Verification of Equipment Performance; and 13, Ventilation Controls Significant updates and expansion.
- Section 10 Mechanical Ventilation Systems Design includes significant updates and expansion A new subsection now includes range hoods and the related discussion of the new metric, capture efficiency.
- References. Approximately 20 references were added and all previous ones were vetted for needed updates.

The cost of Guideline 24-2015, *Ventilation and Indoor Air Quality in Low-Rise Residential Buildings*, is \$58 (\$48, ASHRAE members). To order, visit [www.ashrae.org/bookstore](http://www.ashrae.org/bookstore) or contact ASHRAE Customer Contact Center at 1-800-527-4723 (United States and Canada) or 404-636-8400 (worldwide) or fax 678-539-2129.



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## Noteworthy

### ASHRAE Proposes Standard to Serve as “Backbone” of Valid Rating Systems

ATLANTA – While many building rating programs exist worldwide, there is not anything in the industry that standardizes the contents of those programs, ensuring users are knowledgeable about what impacts their ratings.

A proposed standard from ASHRAE, currently open for public comment, would serve as the “backbone” of such rating systems.

ASHRAE Standard 214P, *Standard for Determining and Expressing Building Energy Performance in a Rating Program*, is being written to standardize building energy rating programs by requiring the minimum content of any labels associated with rating programs, establishing minimum requirements for rating program documentation and other essential components in rating programs.

The proposed standard is currently open for public comment until Sept. 28, 2015. To learn more or to comment, visit [www.ashrae.org/publicreviews](http://www.ashrae.org/publicreviews).

“There are many entities that are rating buildings utilizing a number of different building rating systems yielding varying results,” Wayne Stoppelmoor, chair of the Standard 214P committee, said. “Feedback from government and regulatory agencies has shown there is an overwhelming need for a standard that provides uniformity in the building energy labeling and disclosure process. We want to provide a non-commercial consensus standard that can be used in international, national and regional legislation, policy making and regulation activities. The goal is to write a standard that provides guidance for establishing rating systems that produce meaningful and consistent results.”

Stoppelmoor said he sees the proposed standard as a way to identify what rating systems should be used to comply with building energy disclosure ordinances and as a guideline for those developing rating systems. It is anticipated that the proposed standard will have minimal impact on existing rating systems.

The standard would establish requirements for:

- Disclosure of building energy use via a rating label and supporting summary documentation
- Determining and expressing energy use, with metered data, of buildings and building sites that are in operation
- Acceptable credentialing criteria for individuals applying the standard and reporting building energy use
- Pre-occupancy (design) and post-occupancy (in operation) conditions
- Format and content of the rating disclosure, the label and supporting documentation.





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# Dallas ASHRAE 2015-2016

## Income/Expense Statement

2014-2015 Annual Budget	Budget	Actual	Percent of Budget
<b>Starting Balance</b>	\$ 19,355.34	\$19,355.34	100%
<b>Income</b>			
(1) - Chapter dues	\$ 28,000.00	\$ -	0%
(2) - Regular Share Interest	\$ 1.00	\$ -	0%
(3) - Meeting - meals, bar	\$ 25,000.00	\$ -	0%
(4) - Roster sponsors	\$ 1,500.00	\$ -	0%
(5a) - Top Golf event	\$ 17,500.00	\$ -	0%
(5b) - Golf tournament	\$ 25,000.00	\$ -	0%
(5c) - Sporting Clay Shoot event	\$ 12,500.00	\$ -	0%
(6) - RP Events	\$ 1,500.00	\$ -	0%
(7) - PN Vinther Scholarship	\$ 5,000.00	\$ -	0%
(8) - Miscellaneous	\$ 100.00	\$ -	0%
<b>Total Income</b>	<b>\$116,101.00</b>		0%
<b>Expense</b>			
(9a) - Meetings - meals,bar,room	\$ 20,000.00	\$ -	0%
(9b) - Meetings - audio/visual	\$ 1,800.00	\$ -	0%
(9c) - Non-Allocated D.L. (Travel Expenses)	\$ 1,000.00	\$ -	0%
(10a) - Research Promotion - Matching Funds	\$ 5,000.00	\$ -	0%
(10b) - Research Promotion	\$ 40,000.00	\$ -	0%
(11) - RP	\$ 300.00	\$ -	0%
(12a) - Seminar - Fall	\$ 400.00	\$ -	0%
(12b) - Seminar - Spring A28	\$ 400.00	\$ -	0%
(13) - Newsletter	\$ 399.00	\$ -	0%
(14) - Website	\$ 110.00	\$ -	0%
(15) - Miscellaneous	\$ 1,000.00	\$ -	0%
(16a) - TopGolf	\$ 8,500.00	\$ 3,655.00	43%
(16b) - Refrigeration Tour	\$ 750.00	\$ -	0%
(16c) - Golf Tournament	\$ 14,700.00	\$ -	0%
(16d) - Clay Shoot	\$ 9,000.00	\$ -	0%
(17) - Winter Meeting Fund	\$ 1,500.00	\$ -	0%
(18) - Roster	\$ 650.00	\$ -	0%
(19) - Regional Dues/Award	\$ 2,800.00	\$ -	0%
(20a) - CPA Fees	\$ 625.00	\$ -	0%
(21a) - USPS P.O. Box	\$ 450.00	\$ -	0%
(22) - Membership promotion	\$ 50.00	\$ -	0%
(23) - Student membership	\$ 300.00	\$ -	0%
(24) - CRC representation	\$ 500.00	\$ -	0%
(25) - Student Activities	\$ 1,000.00	\$ -	0%
(26) - Bank service charges/check printing	\$ 50.00	\$ -	0%
(27) - Awards	\$ 400.00	\$ -	0%
(28a) - PN Vinther Scholarship	\$ 5,000.00	\$ -	0%
(28b) - Scholarships	\$ 2,000.00	\$ -	0%
<b>Total Expense</b>	<b>\$118,684.00</b>	<b>\$ 3,655.00</b>	3%



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# Dallas ASHRAE 2015-2016

## Board of Governors

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Refrigeration	Co-Grassroots Gov't. Activities	Webmaster
Stuart DeVaney Bartos Industries 10350 Olympic Dr. Dallas, TX 75220 Phone: 214.350.6871 Mobile: 214.952.7757 <a href="mailto:sdevaney@bartosindustries.com">sdevaney@bartosindustries.com</a>	Maggie Luttrell Johnson Controls 3021 West Bend Dr. Irving, TX 75063 Phone: 972.868.3678 Mobile: 214.796.3563 <a href="mailto:maggie.m.luttrell@jci.com">maggie.m.luttrell@jci.com</a>	Kevin Chow CCRD Partners 3625 North Hall Street, Suite 1300 Dallas, TX 75219 Phone: 214.521.1661 Mobile: 816.686.9028 <a href="mailto:kevinc@ccrd.com">kevinc@ccrd.com</a>
Publicity	Newsletter Editor	
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**TRANE**

## ASHRAE Dallas Chapter Top Golf Fundraiser



THE COLONY



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- Prize Sponsors (2 total) - \$ 1,000.00
- Table Rental for Product Demo (8 available) - \$500.00



Brought to you by **TRANE**

Wednesday, October 7<sup>th</sup>

4:00 PM – 7:00 PM

(Registration Starts at 3:30 PM)

Top Golf Colony Location

Cost: \$100.00/Player (6 per Bay)

Includes: 3 Hours of Top Golf; Unlimited Soft Drinks, Tea and Water; Unlimited Bistro Menu for 2 Hours; Cash Bar; Help Raise Money for Research Promotion While Having Endless Fun!

To buy your tickets go to [www.dallas-ashrae.org](http://www.dallas-ashrae.org).  
For questions, contact Gene Lowery (Chapter RP  
Chair) at [glowery@texasairsystems.com](mailto:glowery@texasairsystems.com).

Prize sponsors: **BARTOS DUCTSOX**

## ASHRAE Dallas Chapter Refrigeration Tour



### 3000 Ton Thermal Storage Facility



Wednesday, October 7<sup>th</sup>

2:30 PM – 3:45 PM

(Registration Starts at 2:00 PM)

Nebraska Furniture Mart

5600 Nebraska Furniture Mart Dr.,  
The Colony, TX 75056

To register go to:

<http://events.constantcontact.com/register/event?llr=gjruz7dab&oeidk=a07ebjqofkv83d72a5e>

For questions, contact Stuart DeVaney(Chapter  
Refrigeration Chair) at

[sdevaney@bartosindustries.com](mailto:sdevaney@bartosindustries.com)