



THIN-AIR BULLETIN

American Society of Heating, Refrigeration, and Air Conditioning Engineers NM Chapter Region IX Albuquerque, NM

December Social/Tour

ASHRAE NM Dutch December Social/Tour

This month we will hold a Social event with a Brewery Tour at Kellys Brew Pub on December 18th.

Kellys Brew Pub
3222 Central Avenue Southeast
Albuquerque, New Mexico

The Tour will start at 5:00 pm, so please be prompt or arrive a little early. We will then have the Society gathering. There will be no cost for this event; however the cost of any food or beverages is the responsibility of the attendee.

This will be a very casual get together and we hope to see as many of you there as possible! Come have a few laughs with those in the Organization.

MEMBERSHIP:

Don't forget to promote ASHRAE and Benefits of ASHRAE Membership with your co-workers and customers.

Have a Merry Christmas & Happy Holiday Season!

Thanks,
Allen Anaya



President's Message

Dear ASHRAE Member,

The Holidays are upon us, where did the year go? I would like to wish everyone a Happy Holidays and a Happy New Year. I hope all will be safe and enjoy the Holidays.

I would like to thank all of you for your continued support of the chapter. I would encourage coming out to the December Social to enjoy a little down time with other members. I look forward to seeing you at our December Social or at one of our upcoming luncheons.

Finally, I wanted to thank all of the chapter board members for their contribution to ASHRAE Research. Every year each member of the board contributes \$100 to support Research. I encourage all members to support ASHRAE Research. Please contact Patrick Watkins - at phwatkins@bgce.com if you can contribute.

Warmest Regards,

Morgan Royce President 2013-2014

From the History Books

March 1968

President:	William McCord
President-Elect:	Barc Barnett
Secretary:	Robert Friggens
Treasurer:	Peter Lujan



Sundowner Motel – Albuquerque

This month's meeting was a panel discussion on "The Pros and Cons of Subcontracting Mechanical Work and/or Material Direct, by the General Contractor". The panel consisted of representatives from the following companies: Lemke Construction, Rupert Plumbing, General Material Products, St. Joseph Hospital and Bridgers & Paxton. The moderator was William Carroll.

ASHRAE Learning Institute

Seminars & Courses at ASHRAE's Winter Conference and AHR Expo in New York, NY

2 WAYS TO REGISTER

Internet: www.ashrae.org/newyorkcourses

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

Full-Day Professional Development Seminars

\$485/\$395 ASHRAE Member -- Earn 6 PDHs/AIA LUs or .6 CEUs

Commercial Building Energy Audits **NEW!**

Saturday, Jan 18 – 8:00 a.m. to 3:00 p.m.

Healthcare Facilities: Best Practice Design & Applications

Saturday, Jan 18 – 8:00 a.m. to 3:00 p.m.

Significant Changes to Standard 90.1-2010 and IECC-2012 **NEW!**

Tuesday, Jan 21 – 9:00 a.m. to 4:00 p.m.

Energy Modeling Best Practices and Applications

Tuesday, Jan 21 – 9:00 a.m. to 4:00 p.m.

Effective Energy Management in New and Existing Buildings

Wednesday, Jan 22 – 9:00 a.m. to 4:00 p.m.

Operations and Maintenance of High-Performance Buildings

Thursday, Jan 23 – 8:00 a.m. to 3:00 p.m.

Complying with Standard 90.1-2013 **NEW!**

Thursday, Jan 23 – 8:00 a.m. to 3:00 p.m.

Introduction to Building Enclosure Commissioning **NEW!**

Thursday, Jan 23 – 8:00 a.m. to 3:00 p.m.

Half-Day Short Courses

\$159/\$119 ASHRAE Member -- Earn 3 PDHs/AIA LUs or .3 CEUs

Electric Rates, Rules and Regulations **NEW!**

Saturday, Jan 18 – 12:00 p.m. to 3:00 p.m.

Laboratory Design: The Basics and Beyond

Sunday, Jan 19 – 2:00 p.m. to 5:00 p.m.

Air-to-Air Energy Recovery Applications: Best Practices

Sunday, Jan 19 – 2:00 p.m. to 5:00 p.m.

Mathematical Optimization Techniques and their Applications: to HVAC&R Systems and Components

Sunday, Jan 19 – 2:00 p.m. to 5:00 p.m.

Combined Heat & Power: Design through Operations

Monday, Jan 20 – 8:30 a.m. to 11:30 a.m.

High-Performance Building Design: Applications and Future Trends

Monday, Jan 20 – 8:30 a.m. to 11:30 a.m.

IAQ Best Practices for Design, Construction and Commissioning **NEW!**

Monday, Jan 20 – 8:30 a.m. to 11:30 a.m.

Commissioning for High-Performance Buildings

Monday, Jan 20 – 2:45 p.m. to 5:45 p.m.

Designing High-Performance Healthcare Facilities **NEW!**

Monday, Jan 20 – 2:45 p.m. to 5:45 p.m.

Exceeding Standard 90.1-2013 to Meet LEED® Requirements **NEW!**

Monday, Jan 20 – 2:45 p.m. to 5:45 p.m.

Data Center Energy Efficiency

Tuesday, Jan 21 – 1:00 p.m. to 4:00 p.m.

Fundamentals and Applications of Standard 55 **NEW!**

Tuesday, Jan 21 – 1:00 p.m. to 4:00 p.m.

Design of Commercial Ground Source Heat Pumps **NEW!**

Tuesday, Jan 21 – 1:00 p.m. to 4:00 p.m.

Applications of Standard 62.1-2013: Multiple Spaces Equations and Spreadsheets **NEW!**

Wednesday, Jan 22 – 9:00 a.m. to 12:00 p.m.

Troubleshooting Humidity Control Problems

Wednesday, Jan 22 – 1:00 p.m. to 4:00 p.m.

HVAC Design Training

March 17 – 19, 2014 --- Level I - Essentials --- Atlanta, GA and Toronto, Canada

March 20 – 21, 2014 --- Level II - Applications --- Atlanta, GA

HVAC Design: Level I – Essentials - Registration is \$1,239, \$989 (ASHRAE Member)

Gain practical skills and knowledge in designing, installing and maintaining HVAC systems that can be put to immediate use. The training provides real-world examples of HVAC systems, including calculations of heating and cooling loads, ventilation and diffuser selection using the newly renovated ASHRAE Headquarters building as a living lab.

HVAC Design: Level II – Applications - Registration is \$829, \$679 (ASHRAE Member)

In two days, gain an in-depth look into *Standards 55, 62.1, 90.1, and 189.1* and the *Advanced Energy Design Guides*. Training will focus on a range of topics including: HVAC equipment and systems; energy modeling; designing mechanical spaces; designing a chiller plant; and BAS controls.

Visit www.ashrae.org/hvacdesign to register

ASHRAE Certification Programs

Receive the recognition you deserve by earning an ASHRAE Certification at the 2014 ASHRAE Winter Conference and AHR Expo.

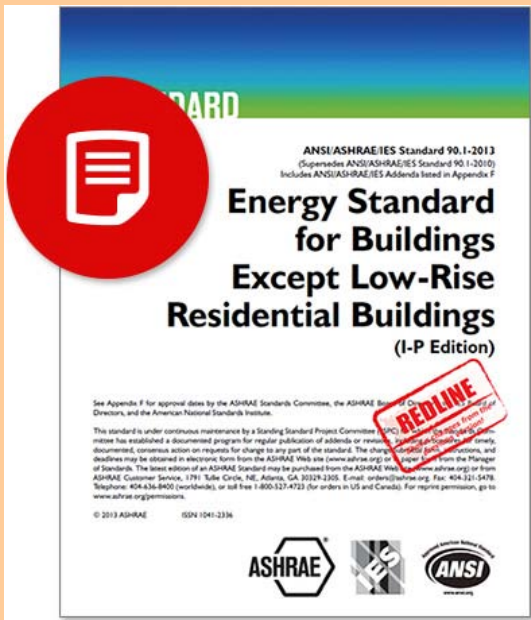
Take advantage of ASHRAE's special administration of the certification examinations on January 23, 2014. All exams will begin at 9:00 a.m. (candidates must report to the testing room at 8:30 a.m.). These exams are being offered in conjunction with the 2014 ASHRAE Winter Conference and AHR Expo in New York City. Refresh your knowledge in preparation of earning an ASHRAE certification with learning opportunities at the show and conference.



For more information, visit www.ashrae.org/NYCExams

Hot Products from ASHRAE

Latest Edition of Standard 90.1 Now Available as a Redline



Priced from \$135 (Members Pay \$115)
Available now in I-P or SI units

Use the redline to instantly identify updates in the 2013 revision of Standard 90.1.

This expanded document compares the 2013 edition to 2010, ensuring you know exactly what changes have been made from one edition to the next.

It's an indispensable reference for engineers and other professionals involved in the design of buildings and building systems. Select the redline upgrade in print or digital format to receive two documents; the clean, active version of the standard and the redline version.

About Standard 90.1-2013: *Energy Standard for Buildings Except Low-Rise Residential Buildings (ANSI approved; IES co-sponsored)*

provides the minimum requirements for energy-efficient design of most buildings. Learn more

About Redlines: A redline document is a quick, easy way to compare all the changes between the active standard and the previous version. Redlines allow users to instantly identify additions, deletions, and other formatting and content changes. Learn more

Visit www.ashrae.org/bookstore to learn more about this and other outstanding ASHRAE publications!

Society News Release

Dec 11, 2013

ASHRAE Publishes 2013 Version of Thermal Comfort Standard

ATLANTA – Major revisions for design and measurement of comfortable spaces are included in a newly published 2013 standard from ASHRAE.

ANSI/ASHRAE Standard 55-2013, *Thermal Environmental Conditions for Human Occupancy*, combines the 2010 standard and 18 published addenda into a consolidated standard. The core of the standard in Sections 4 and 5 specifies methods to determine thermal environmental conditions (temperature, humidity, air speed and radiant effects) in buildings and other spaces that a significant proportion of the occupants will find acceptable at a certain metabolic rate and clothing level.

Section 7 of the standard includes new requirements for the measurement and evaluation of existing thermal environments and is also applicable to commissioning.

The standard has been re-written with a renewed focus on application by practitioners and use of clear, enforceable language. Requirements are now clearly stated and calculation procedures appear sequentially.

Other noteworthy additions to the standard include an allowance for the cooling effect of air movement as a way to extend the upper limit of the comfort zone in naturally conditioned spaces and addition of a predictive model for occupant clothing behavior based on extensive field research. These additions provide new methods for improving occupant comfort while minimizing energy use, according to Gwelen Paliaga, chair of the committee that wrote the standard.

Documentation requirements to show that a design meets Standard 55 are contained in Section 6 and a sample compliance form is provided in appendix J. Both of these sections are clarified and streamlined for use by owners and third party rating systems.

The 18 addenda published since 2010 are summarized in detail in Informative Appendix M, and the most noteworthy changes are summarized here:

- The normative body of the standard, comprising Sections 3 through 8, have been rewritten and reorganized.
- Requirements are more clearly stated, definitions are added to Section 3, and informative supporting information has been moved from the body to informative appendices.
- Procedures are clarified and appear in a more sequential manner. For example, a “representative occupant” with representative “clothing insulation” and “metabolic rate” shall be defined as input into thermal comfort calculations.
- The cooling effect of air movement now applies to naturally conditioned spaces as well as mechanically conditioned spaces, and in each case correction factors are given that adjust the comfort boundaries when air movement is present.
- A new alternate procedure for estimating occupant clothing insulation based on outdoor weather was added. This procedure is based on extensive field research and can be used for design calculations, annual simulations and control of occupied spaces.
- Major revisions to Section 7 procedures for measuring comfort in existing spaces including survey and physical measurement methods and a new section on evaluating and reporting results.
- The standard now requires that two of the key comfort parameters, air speed and air temperature, must be calculated as an average that the occupant experiences at three heights across the body and over a period of time.

The cost of ANSI/ASHRAE Standard 55-2013, *Thermal Environmental Conditions for Human Occupancy*, is \$95 (\$81, ASHRAE members). To order, contact ASHRAE Customer Contact Center at 1-800-527-4723 (United States and Canada) or 404-636-8400 (worldwide), fax 678-539-2129, or visit www.ashrae.org/bookstore.

Society News Release

Dec 10, 2013

2014 Winter Conference

Low Energy vs. Good Indoor Environment Quality: Working To Achieve Both in Homes

ATLANTA – In one corner, we have good indoor environment quality. In the other corner, we have energy efficiency. Do designers have to battle it out between the two or can they coexist peacefully?

Striking a balance between good indoor environmental quality and energy efficiency in homes is being addressed in a seminar at ASHRAE's 2014 Winter Conference.

"Great progress has been made in reducing residential energy consumption, with the latest buzzword being net zero," seminar chair Andrew Persily, Ph.D., National Institute of Standards and Technology, Gaithersburg, Md., said. "Whether a home is net zero or very low energy, it is critically important that energy efficiency measures do not compromise the indoor environment. Homes, and buildings in general, exist for the occupants, not to win energy efficiency competitions, but the industry often sees tension between the goals of energy efficiency and indoor air quality. As we move toward low-energy homes, we need to remember and address IAQ, providing low-energy homes that support and ideally improve the health and comfort of the occupants."

ASHRAE's 2014 Winter Conference, takes place Jan. 18-22, at the New York Hilton, New York, N.Y. The International Air-Conditioning, Heating, Refrigerating Expo®, held in conjunction with the Winter Conference, runs Jan. 21-23, www.ahrexpo.com. The Expo, held at the Javits Convention Center, takes place Tuesday, Wednesday and Thursday as opposed to the traditional Monday, Tuesday and Wednesday.

For complete Conference information and to register, visit www.ashrae.org/newyork.

The seminar, IAQ in Low-Energy Homes: Avoiding Collateral Damage, is being held on Sunday, Jan. 19. It is part of a track focused on Indoor Environmental Health/Indoor Environmental Quality.

Speakers will share case studies and research that show how low energy and good IEQ can work in tandem.

Presentations and speakers include:

- Brennan Less, Residential Building Systems Group, Lawrence Berkeley National Laboratory, Berkeley, Calif., Field Study of Airtightness, Ventilation and IAQ in 24 High Performance Green California Homes
- Brett Singer, Ph.D., Lawrence Berkeley National Laboratory, Berkeley, Calif., Volatile Organic Compounds (VOC) and Formaldehyde (HCHO) Measurements in New Homes
- Kurt Roth, Ph.D., Fraunhofer Center for Sustainable Energy Systems, Cambridge, Mass., The Realities of Operation and Occupancy in Net Zero Energy Homes: Two Case Studies
- Persily, Ph.D., IAQ Specs in a Net-Zero Energy Research Home: How Well Did They Work

Other sessions in the Indoor Environmental Health/Indoor Environmental Quality track include:

- Chemical Laboratories Classification to Improve Safety and Energy Efficiency, Sunday, Jan. 19
- Selected papers in the Conference Paper Session 2, Sunday, Jan. 19
- Can Low Energy Buildings be Healthy for Occupants?, Sunday, Jan. 19
- Indoor Air Quality: Impact of Variables, Monday, Jan. 20
- The Human Factor - Better Understanding of Comfort, Environment, and Risks, Monday, Jan. 20
- Designs for Thermal Comfort and Energy Savings: Real Practices in School and Office Buildings, Monday, Jan. 20
- A Comprehensive Look at Infectious Disease and Air Filtration in Healthcare Facilities: Energy Saving, IAQ Performance, and What Makes You Sick, Tuesday, Jan. 21
- Real Co\$ of Filtration, Tuesday, Jan. 21
- Impact of Unvented Combustion on Indoor Air Quality, Wednesday, Jan. 22
- Lessons Learned from Storm Recovery, Wednesday, Jan. 22

Society News Release

Dec 3, 2013

2014 Winter Conference

Importance of Building Performance Illustrated by ASHRAE Certification Program

ATLANTA – Starting out on the right step in the design, construction and operation of buildings to ensure optimum building performance is crucial. One way ASHRAE is working to improve performance, of both people and buildings, is through its certification program.

ASHRAE's certification programs recognize industry professionals who have mastered the knowledge and skills reflecting best practices in certain aspects of building design and operations. Earning this recognized, high-quality industry certification is a distinct honor that demonstrates value to the design process and serves as a springboard for continued professional development. ASHRAE has certified more than 1,600 HVAC&R professionals.

All six of ASHRAE's certification exams are being given as part of ASHRAE's 2014 Winter Conference, Jan. 18-22, at the New York Hilton, New York, N.Y., www.ashrae.org/newyork. The International Air-Conditioning, Heating, Refrigerating Expo®, held in conjunction with the Winter Conference, runs Jan. 21-23, www.ahrexpo.com. The Expo, held at the Javits Convention Center, takes place Tuesday, Wednesday and Thursday as opposed to the traditional Monday, Tuesday and Wednesday.

Take advantage of ASHRAE's special administration of the certification examinations on Jan. 23, 2014. The deadline to apply is Jan. 3, 2014. For complete information, visit www.ashrae.org/2014nycexams.

ASHRAE's six certifications are:

- 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)
- Operations & Performance Management Professional (OPMP)