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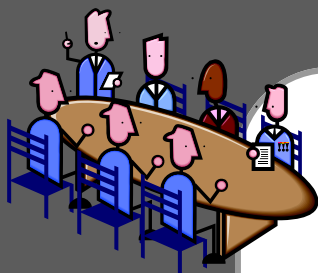
ASHRAE 2015 Annual Conference



**Go to ASHRAE.org to download a guide to the
2015 Annual Conference**

ASHRAE has a warm southern welcome as the 2015 Annual Conference comes to the Society's hometown of Atlanta, Ga. It's been nearly 15 years since the last time ASHRAE hosted a conference here. And while the city and the Society have grown and changed, the hospitality remains the same. We look forward to seeing y'all!

(refer to page 13)



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SAVE THE DATE

ASHRAE 2014-2015 Meeting Schedule				
Date	Event	pdh / Theme	Location	Schedule
09/08/14	RIT Golisano Institute for Sustainability (GIS) Bldg: Green design and the unique energy components that went into this building Mr. Brian Danker of M/E Engineering, Mr. Mark Maddalina of SWBR Architects	Available Membership Night	Burgundy Basin	5:00 PM
10/06/14	Harbec Plastics: Sustainability, Cogen Energy, Economics of Energy in manufacturing, and Challenges of delivering energy across lot boundary lines Mr. Bob Bechtold, Harbec Plastics	Available	Mario's	12:00 PM
11/10/14	Vibration Isolation - HVAC Noise and Vibration Control Mr. Dick Sherren, Kinetics Noise	Available	Mario's	12:00 PM
12/08/14	Freeze Block Technology Mr. Bob Cooney, Cooney Coil and Energy	Available Membership Promotion	Mario's	12:00 PM
01/09/15	Tour of 'Gene Polisseni Center' Ice Rink followed by an RIT Men's Hockey Game RIT Tigers vs American International <i>(tour for adults only, families are encouraged to come for the game)</i>	--- Family Night	RIT	Tour 3:30 Game 7:00 pm
02/06/15	Annual ASHRAE Valentines Dinner Dance	---	Colgate Rochester Crozer Divinity School	7:00 PM
02/09/15	Air Flow Measurement, IAQ and Building Pressure Control Mr. Jim Riendeau, Ebtron	Available	Mario's	12:00 PM
03/09/15	How to use Classroom Airhandlers with \$12.60 to meet RC25 Classroom Design for Intelligently Quiet Schools Mr. Kevin McGachy Systemair ChangeAir	Available Membership Promotion	Mario's	12:00 PM
04/06/15	Ethical Decision Making Barry Benator, PE, CEM - Benator, Inc. ASHRAE Distinguished Lecturer	Available	Mario's	12:00 PM
05/11/15	Annual ASHRAE Golf Outing and Picnic	---	Ravenwood Golf Club	9:30 AM Golf 4:30 - 8:00 Picnic

2014-2015 Presidential Award of Excellence Summary

Chapter #	Chapter Name	Chapter Members	Member Promotion	Student Activities	Research Promotion	Chapter Technology Transfer	History	Chapter Operations	Chapter PAOE Totals
11	Rochester	238	275	0	255	100	0	0	630

Mission Statement

ASHRAE will advance the arts and sciences of heating, ventilation, air conditioning, refrigeration and related human factors to serve the evolving needs of the public and ASHRAE members.



Shaping Tomorrow's
Built Environment Today

Vision Statement

- will be the global leader in the arts and sciences of heating, ventilation, air conditioning and refrigeration.
- will be the foremost, authoritative, timely and responsive source of technical and educational information, standards and guidelines.
- will be the primary provider of opportunity for professional growth, recognizing and adapting to changing demographics, and embracing diversity.

President's Message

The Rochester Chapter ASHRAE program year is complete, and a great year it was! Thank you to the Rochester ASHRAE officers, committee members and membership. The Rochester chapter appreciates your time and dedication. It is your effort to give back to our ASHRAE community that made our chapter's year the success that it is was!

The last order of business at the May Golf /Picnic event was the announcement of our 2015-2016 Chapter Officers and Board of Governors.

2015-2016 ASHRAE Rochester Chapter Officers

President	Christina Walter
President Elect	Jeff Close
Secretary	William Clark
Treasurer	Paul Kenna

Board of Governors

BOG 3 rd year	Scott Edwards
BOG 3 rd year	Mike Benedict
BOG 2 nd year	Tom Streber
BOG 2 nd year	Branden Farnsworth-Weinblatt
BOG 1 st year	Steve Dear
BOG 1 st year	Sam Scorsone

Also presented at the Golf /Picnic event was the Realto E. Cherne "Engineer of The Year Award". This award is presented to the individual of the Rochester Chapter for outstanding contribution of service on behalf of the chapter. Recognition is made for service to the community through education, technical achievement and support of society goals. The 2014-2015 award was presented to Thomas E. Piekunka, PE. Tom is also past President of the Rochester Chapter of ASHRAE 1991-1992. Congratulations Tom!

The Rochester ASHRAE Chapter is very proud to have presented an "ASHRAE Community Sustainability Project" to the Rochester Rotary Sunshine Campus. The Rochester ASHRAE chapter has provided turn-key HVAC design and installation for the "Rotary Sunshine Campus Sensory Stimulation Building". This building will be used by thousands of campers each summer who attend camp programs. The building is designed to assist campers who are dealing with autism or other sensory issues the ability to enter a building that is designed to assist them in calming and allowing them the ability to have a successful camp experience. Thank you to all who participated. It was your donation of time, expertise, material and equipment that made this great project happen! We are very grateful to have been part of this project!

It has been a great year! See you all at the Clambake in September!

Best,



Edward J. Burns
Rochester ASHRAE President

Please check out our chapter website at www.rochester.ashraechapters.org or if facebook is your preferred method of communication take a moment to "like" us www.facebook.com/#!/ashraerochester



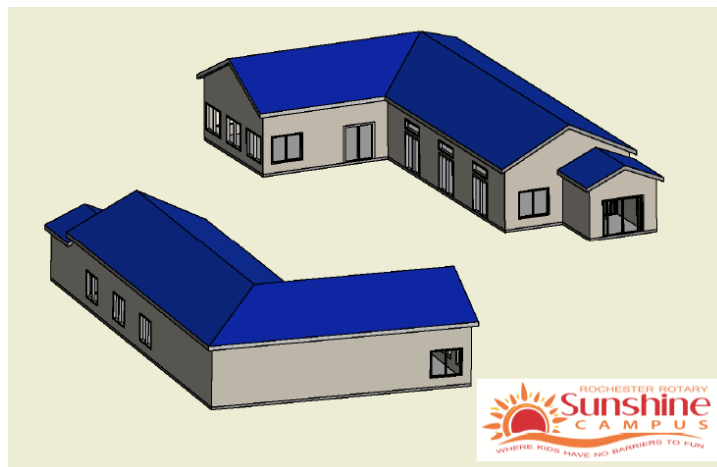
Ed Burns, 2014-2015 President

The Sensory Stimulation Building at the Rochester Rotary Sunshine Campus

The Sunshine Campus has been serving the Rochester community and people with disabilities since 1922. Each summer over 2,500 children and adults with disabilities attend the Sunshine Campus for a week long residential camping programs. Over the last 10 years we have seen an increase of children who are diagnosed with autism or deal with being over stimulated and as you can imagine camp can be a pretty loud place. The camp staff wanted to find a way to make the experience a fun environment for all who attend and determined the need for a Sensory Stimulation Building that is filled with activities that deal with our different senses (visual, hearing, smell, touch, taste).

We are excited that construction will begin this spring on the building for our campers to provide a space where they can use a water table, climbers and ball crawls, fiber optics room, soothing music and lighting, swings, marble light walls and a water feature to help them recharge and reengage in camp activities. Prior to constructing an entire building we set up a sensory room for our campers where they could utilize the many activities at all times of day. We soon saw how important it was to have a space that was central to the program areas of the Sunshine Campus and having a space large enough to accommodate our campers needs.

This area will be used year round by families within our community. We are excited to share the news of this building with folks in our community interested in helping meet the needs of people with disabilities.



Like us on Facebook!



Visit our new Facebook page by searching for “ASHRAE Rochester” on Facebook. Any ideas for additions or improvements email to Mark Kukla at mark@airsystemsbalancing.com. Keep up to date with current events and photos from recent meetings.

Rochester Chapter Meetings

Highlights from May ASHRAE Golf Outing



(Right) Past President Thomas E. Piekunka receives the 2014/2015 Realto E. Cherne "Engineer of The Year Award". This award is presented to the individual of the Rochester Chapter for outstanding contribution of service on behalf of the chapter. Recognition is made for service to the community through education, technical achievement and support of society goals. Tom began his career thirty six years ago in the HVAC mechanical contracting and service field. Tom graduated with an Associate's Degree in Air Conditioning Technology from SUNY Alfred in 1981 and then graduated with a Bachelor of Technology in Mechanical Engineering from the Rochester Institute of Technology in 1984.



(Left) Al Rodgers gives a Service Award to Carl Lundgren of RIT for his contributions to the mechanical engineering industry and the HVAC industry during his 34 years as a professor in the MET department. He retired last month.

Carl has been involved in teaching both lower as well as upper level classes, specifically teaching energy related courses such as HVAC Design 1 and 2, Thermodynamics, Fluid Mechanics, Heat Transfer, Energy Management, Solar Power and Alternate Energy as well as many other engineering courses over the years.

He was the RIT ASHRAE Student Chapter Faculty Advisor for many years.

Rochester Chapter Committee Chairs Updates

Membership

ASHRAE Rochester Chapter- Membership Promotion

Please remember to take a few minutes to make sure that your profile is up to date at www.ASHRAE.org. Maybe you've changed jobs? email address? or would like to advance your membership (i.e. Associate Member to Member). Keeping this information current ensures that you get the most value out of ASHRAE.

There is also a lot of emphasis this year to attempt to do as much of our Membership Renewals and New Member Applications online to decrease the amount of paperwork for the Society and make the process "Greener." If you have any questions or need assistance with any Membership Issues, please let me know.

Thank you, and as always, thank you for your support for ASHRAE.

Sincerely,
Jake Hall

Membership Promotion Chair



Shaping Tomorrow's
Built Environment Today

Student Membership Application

What You'll Get With Your ASHRAE Student Membership!

What's "Cool" In ASHRAE

- ASHRAE maintains standards for indoor air quality
- ASHRAE promotes energy efficiency, savings and recovery
- ASHRAE reports on building controls, automation and integration
- ASHRAE focuses on green building issues and green technology
- ASHRAE promotes solar and other alternative energy sources
- ASHRAE offers certification programs, online learning opportunities and courses and seminars at ASHRAE Conferences

How Can ASHRAE Help You?

- Provide access to new technology
- Offer professional development opportunities
- Create opportunities for networking
- Offer online continuing education programs and eLearning programs

Student Member Benefits

- Access to members-only web pages
- Discounts on ASHRAE Handbooks
- Monthly ASHRAE Journal - print and digital
- HVAC&R Industry and Society Connections eNewsletters
- Discounted ASHRAE Annual and Winter Conference registration (AHR Expo, Student Program, Technical Sessions)
- Virtual online HVAC&R resume posting, job and internship searching program

ASHRAE Student Member Opportunities

- Society and chapter-level scholarships for both undergraduate and graduate engineering students
- Discounts for student members on select publications, go to www.ashrae.org/studentbookstore for more information
- Student Design Competition
- Networking with local ASHRAE Chapters
- Senior Undergraduate Project Grant Program
- At the student branch level, you'll enjoy meeting other students with similar interests - if your school hasn't yet started a student branch, take charge and contact a faculty member and ask for help on getting started!

You can continue your student membership after college with the SmartStart Program. The SmartStart program locks in the price of student dues for the first year of membership after graduation.

Visit www.ashrae.org/students
to join online!



CRC Thursday Night Welcome Dinner

Aug 20, 2015

5:00 pm till Midnight

246 West Willow St.
Syracuse, NY 13202

A MUST ATTEND EVENT!!!

FUN, ENTERTAINING AND A GREAT TIME TO
SOCIALIZE WITH YOUR FRIENDS.

- BEST BBQ IN TOWN!
- ORIGINAL DINOSAUR BBQ SITE.
- DINOSAUR BBQ OPENED IN 1988.

Happy Hour
Appetizers and
1 Hour Open Bar!!!
5:00 – 6:00 pm



Live band music till midnight!!!



**YEA and all, are
invited to the Fun!!!**



Please mark your calendars for August 20 to 22 because the Central New York Chapter CRC is fast approaching. We have many things planned for you and your family to enjoy in the Central New York area. Among the events planned are the welcome party at the “Original” Dinosaur BBQ and replacing the traditional Presidential Dinner with a fun filled evening with a clambake at Hinderwadel’s Clam Grove. You can make reservations plus check out other things to do in the area on our website at www.ashrae2015crc.com

Hope to see you in Syracuse !

The Crowne Plaza has a shuttle available for use by hotel guests. The shuttle is available anytime throughout the day. The shuttle will bring you and your family to the following destinations:

- Airport drop off and pick up
- **Destiny USA** - This is one of Americas largest shopping and entertainment venues. More than 200 retailers, kid’s adventure including go carts, Wonderworks, Dave and Busters and much more. The Onondaga Creekwalk starts (or ends) at Destiny USA. www.destinyusa.com;
- **Armory Square** – Armory Square is located downtown and includes boutique shopping and a variety of restaurant, cafes and bars with outdoor seating and entertainment, the MOST (Museum of Science and Technology). Armory Square is also the start (or end) of the Creekwalk, a walking path along Onondaga Creek through the heart of Syracuse. www.Armorysq.org ; www.most.org ; www.syracuse.ny.us/Creekwalk.aspx
- **Downtown** – Outside of Armory Square is a host of other restaurants, shops and museums including the Erie Canal Museum, Everson Art Museum. Syracuse is filled with beautiful architecture. www.downtownsyracuse.com; www.Everson.org ; www.eriecanalmuseum.org; www.CNYhistory.org
- **Onondaga Lake Parkway** – This Park on the lake is a recreational gemstone, with a 10 mile biking, walking, rollerblading trail on the lake, Wingman’s kid’s park, the Salt Museum, picnic and recreational areas, and a short walk to the village of Liverpool. www.onondagacountyparks.com/onondaga-lake-park

Access to these venues by the free shuttle is a great way for your family to enjoy the Syracuse area while visiting for the 2015 ASHRAE Region 1CRC.



Tips for ASHRAE Scholarship Applicants

Make sure ...

- You meet all applicable criteria
- You read the application carefully and answer all questions completely and honestly.
- The application and all required documents are submitted or postmarked on or before the applicable deadline.
- Your application is NEAT, legible (typed or handwritten clearly), and proper English (correct grammar and spelling) is used when responding to essay questions.
- To take time to submit a brief, non-required introductory cover letter
- You are clear and thorough when stating goals and financial need.
- You contact the nearest ASHRAE chapter for an interview with the Student Activities Chair or other officer to learn more about the Society.
- You find out if your school hosts an ASHRAE student branch.
- You contact ASHRAE headquarters if you have any questions and to ensure your application has been completed and submitted properly.

More information on the scholarship and details on how to apply can be found at www.ashrae.org/scholarships.

ASHRAE 2015 Annual Conference
 June 27-July 1, 2015
 Atlanta, Georgia



ASHRAE has a warm southern welcome as the 2015 Annual Conference comes to the Society's hometown of Atlanta, Ga. It's been nearly 15 years since the last time ASHRAE hosted a conference here. And while the city and the Society have grown and changed, the hospitality remains the same. We look forward to seeing y'all!

Airline Transportation - Discounted Airfares for ASHRAE



Delta Air Lines is pleased to offer special discounted airfares for ASHRAE

To take advantage of these discounts, follow these steps:

Click on www.delta.com/booking and enter Meeting Event code NMKBW then continue with online booking process.

Or you can call Delta Meeting Network@ reservations at 1-800-328-1111**, Monday - Friday, 7:30 a.m. - 7:30 p.m. (CT) and refer to File Meeting Code (new code will be posted soon).

**\$25 service fee for booking via 1-800 phone number

[https://www.ashrae.org/membership--conferences/
 conferences/2014-ashrae-annual-conference](https://www.ashrae.org/membership--conferences/conferences/2014-ashrae-annual-conference)

Registration

Registration Opens March 1

✓ Early bird fees from March 1 through April 26

- \$425, member/\$635, non-member
- \$400, first-time member attendee/\$610, first time non-member attendee
- \$115, Life Members

Advanced fees from April 27 through June 7

- \$450, member/\$660, non-member
- \$425, first-time member attendee/\$635, first-time non-member attendee
- \$125, Life Member

Full registration fees from June 8 through June 27

- \$580, member/\$780, non-member
- \$555, first-time member attendee/\$755, first-time non-member attendee
- \$135, Life Member

Registration fees for speakers, student branch advisors and students

- \$115, speaker
- \$25, student branch advisor
- \$25, student member/\$55, full-time student non-member

Keynote Speaker

✓ Legendary NASA Flight Control Director Who Led the Effort to Save *Apollo 13*

Gene Kranz is the keynote speaker at the opening Plenary Session, held Saturday, June 27. Registration is not required to attend the Session, which also features the Honors and Awards program.

As the leader of the "Tiger Team" of flight directors who brought the Apollo 13 spaceship safely back to Earth on April 17, 1970, Kranz demonstrated extraordinary courage and heroism.

Commissioned into the US Air Force in 1954, Kranz flew high-performance jet fighter aircraft and was a flight test engineer on early jet bomber development. In 1960, Kranz joined the NASA Space Task Group at Langley, Virginia, as a flight controller on Project Mercury. He served as flight director for the 33 missions of Projects *Gemini*, *Apollo*, and *Skylab*, and led the flight control team during the first lunar landing.

Kranz retired from NASA in 1994 after 37 years of federal service, and is currently a consultant and speaker. The hit film *Apollo 13* chronicles Kranz's struggle to devise the plan that would safely bring the ship and its crew of three astronauts home after its oxygen system failed. Actor Ed Harris portrays Kranz in the film, which was directed by Ron Howard.

Kranz was a co-recipient of the Presidential Medal of Freedom awarded by President Nixon for the Apollo 13 mission, and was designated a Distinguished Member of the Senior Executive Service by President Reagan.

Since his retirement from NASA, Kranz has served as a flight engineer on a B-17 "Flying Fortress," constructed an aerobatic biplane, and published a *New York Times* best-selling memoir about his experiences in the space program. His book, *Failure is Not an Option: Mission Control from Mercury to Apollo 13 and Beyond*, was selected by The History Channel as the basis for a documentary on Mission Control.

Stay Tuned for more details!

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News

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For Release:

May 12, 2015

Contact: Jodi Scott

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New ASHRAE Standard Provides Method of Test on Determining Heat Gain of Office Equipment

ATLANTA – The growing use of plug loads in buildings as well as insufficient data on how much energy they generate present a challenge to engineers in determining how to best cool a building.

Guidance to meet that challenge is contained in a new standard from ASHRAE. ASHRAE/ANSI Standard 203-2014, *Method of Test for Determining Heat Gain of Office Equipment Used in Buildings*, prescribes methods of test to determine the range and average operating heat gains of electrical equipment for use in cooling load calculations. The standard applies to plug-load type electrical equipment.

Plug loads (computers, monitors, printers, projectors, etc.) are estimated to use between 20 to 50 percent of building energy use. They have evolved to become a larger percentage of a building's overall heat.

Two factors are responsible for that increase, according to Glenn Friedman, chair of the Standard 203 committee.

"First, over time, computer use has continued to increase, resulting in a much larger number of personal computers in buildings," he said.

"Second, advances in building techniques have improved envelopes and reduce that portion of load/energy use."

Engineers optimize HVAC equipment selections by performing cooling load calculations. Internal heat gains from plug loads are a significant portion of those calculations.

"Most plug loads operate at a fraction of their nameplate electrical load, so, as a result, produce significantly less heat load than engineers may use in their cooling load calculations based on those nameplate values," he said. "This can result in oversizing of air-conditioning equipment, resulting in extra initial cost for that equipment as well as higher operating cost."

Friedman noted that engineers face several challenges when it comes to determining heat gain of equipment. Since there are no standards for establishing how the power consumption or heat rejection data or various plug loads is determined, it is difficult for engineers to accurately use this data in their cooling load calculations. ASHRAE has funded research to develop a test method and measure plug load type equipment heat rejection. In addition, plug load type equipment is an ever evolving market, so equipment design changes frequently and requires new testing for power consumption and generation of heat rejection data for cooling load calculation use.

The cost of Standard 203-2014, *Method of Test for Determining Heat Gain of Office Equipment Used in Buildings*, is \$41 (\$35 member). 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.

ASHRAE, founded in 1894, is a global society advancing human well-being through sustainable technology for the built environment. The Society and its more than 50,000 members worldwide focus on building systems, energy efficiency, indoor air quality, refrigeration and sustainability. Through research, standards writing, publishing, certification and continuing education, ASHRAE shapes tomorrow's built environment today. More information can be found at www.ashrae.org/news.

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News

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For Release:

May 20, 2015

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Deadline for Call for Papers Extended for International Conference on Energy Research and Development

ATLANTA – An extension for papers has been announced for a conference focused on emerging energy conversion technologies, conservation and management strategies.

Organized by Kuwait University and ASHRAE, the 6th International Conference on Energy Research and Development (ICERD-6) takes place March 14-16, 2016, in Kuwait.

Abstracts (400 words in length) are due June 15, 2015. If accepted, papers are due September 15, 2015. Authors of accepted papers are responsible for travel and registration. Three nights hotel accommodations are free for authors presenting papers. Submittal information can be found at www.ashrae.org/Kuwait2016.

The Conference seeks to optimize the utilization of basic energy resources in the major energy consuming sectors in the arid region of the Arabian Peninsula. The Conference builds upon the five previous conferences that attracted the international energy research and development community.

More than 300 registrants, including decision makers to help in setting energy policies not only for Kuwait but also for the region, are expected to take part.

Topics include but are not limited to:

- Energy Conversion and Management
- Energy Conservation
- Fuels and Alternatives
- Energy Policy and Planning
- Combined and Cogeneration Energy Systems
- Air-conditioning and Refrigerating Systems
- Energy and Environmental Issues
- Energy and Sustainable Development
- Renewable Energy Technologies
- Energy Storage
- Thermodynamics, Heat Transfer and Fluid Dynamics
- Thermodynamic Optimization and Exergy Analysis
- Plant and Facilities Mechanical Integrity
- Emerging Energy Technology
- Material Design and Analysis

The papers will undergo a peer-review conducted by ASHRAE and overseen by the scientific committee.

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News

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For Release:
May 26, 2015

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New ASHRAE Publication Provides Background on Server Efficiency Metrics

ATLANTA— Since its inception in 2003, ASHRAE Technical Committee TC 9.9 has focused on the challenge of publishing valuable content to address the rapidly changing world of mission critical facilities, data centers, technology spaces and electronic equipment (from electronic equipment to large data center campuses). The 12th book in the ASHRAE Datacom Series “Server Efficiency – Metrics for Computer Servers and Storage” is now available.

“The industry has always been interested in server performance and efficiency metrics, but it is a complicated topic,” Don Beaty, chair of ASHRAE TC 9.9 Publications Committee, said. “This book serves as a consolidation point for most of the existing measures of computer server and storage subsystems energy efficiency.”

Each major chapter is dedicated to a particular industry metric or group of metrics. It describes the metric, provides an indication of its target market and includes relevant reference information for learning more about the metric. Also, each section concludes with examples of data that are generated from the subject benchmark or tool, along with an explanation for how to interpret the data.

“This book combined with the rest of the Datacom Series provide a great reference library covering a wide range of Datacom issues including thermal guidelines, trend predictions, best practices, green tips, power usage effectiveness and many more” said Beaty.

The cost of “Server Efficiency – Metrics for Computer Servers and Storage” is \$59 (\$50 member). 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.

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News

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For Release:

June 1, 2015

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Defining Zero Energy and the Pathway to Achieving It Explored at ASHRAE Conference

ATLANTA – Zero energy buildings (ZEBs) eliminate the use of non-renewable energy sources by decreasing energy use and producing enough renewable energy to meet the annual energy use attributable to their buildings. While the concept of ZEBs is generally accepted in the building industry, no common definition exists. This creates a challenge in trying to incentivize such buildings and in developing common design strategies.

"We talk about green buildings, sustainable buildings and high performing buildings, but it is hard to measure success," Paul Torcellini, Ph.D., P.E., National Renewable Energy Laboratory, Golden, Colo., said. "Zero energy gives you an energy goal that you can predict and measure and you know if you've achieved it – 'Yes, this is' or 'no, this isn't a zero energy building.'"

Torcellini is a speaker in a seminar on zero energy buildings being held at the ASHRAE 2015 Annual Conference, June 27-July 1, at the Atlanta Hilton, Atlanta, Ga. To register or for more information, visit www.ashrae.org/atlanta.

The seminar, "What is a Zero Energy Building, and How Can We Get There?," is part of the Conference Technical Program, which features some 100 sessions, with more than 300 presenters and 103 paper presentations.

Torcellini also is involved in an effort by the National Institute of Building Sciences (NIBS) for the U.S. Department of Energy to develop a common definition for zero energy buildings.

Zero energy buildings have tremendous potential to transform the way buildings use energy, according to Neil Leslie, P.E., Gas Technology Institute, Des Plaines, Ill., who is chairing the seminar. Zero energy homes are becoming more affordable with the availability of lower cost solar panels and advances in high performance designs. Large private commercial property owners are interested in developing zero energy buildings to meet corporate goals. In response to regulatory mandates, national government agencies and many state and local governments are beginning to move toward zero energy targets for both commercial and residential buildings.

"By combining incredibly energy efficient design with renewable energy generation, ZEBs are the holy grail of energy efficient building operation," speaker Kent Peterson, P.E., BEAP, P2S Engineering, Inc., Long Beach, Calif., said. Peterson also is involved in the NIBS effort to develop a common definition.

But that's difficult without defining what it means to have a zero energy building. Having a common definition will make it easier for governments and utilities to recognize or incentivize zero energy buildings, according to the NIBS public review document. Report authors also note that having a common definition and corresponding methods of measurement "would have a significant impact on the development of design strategies for buildings and help spur greater market uptake of such projects."

Continued on next page

Torcellini said the reasons for pursuing zero energy vary: cost reduction; energy sustainability and security; reduction of carbon emissions; and lessening air and water pollution.

"Regardless of the reasons, to reduce our energy impact, we must reduce our non-renewable fuel consumption," he said.

The seminar discusses North American and European efforts to develop flexible and usable concepts and definitions related to zero energy buildings and near zero energy buildings that can be used for a building, or group of buildings, considering on-site and nearby renewable energy options.

Speakers are:

- (Net) Zero Energy Building Definitions and Boundaries, Kent Peterson, P.E., BEAP, P2S Engineering, Inc., Long Beach, Calif. Peterson also is involved in the NIBS effort to develop a common definition.
- Implementation of Zero Energy Building Definitions, Paul Torcellini, Ph.D., P.E., National Renewable Energy Laboratory, Golden, Colo.
- European Strategies to Comply with Zero Energy Building Directives, Bjarne Olesen, Ph.D., Technical University of Denmark, Kongens Lyngby, Denmark

Other sessions in the **High Performance Buildings** track are:

- Occupants and Thermal Comfort, June 28
- Energy Performance of Active Chilled Beam Installations, June 28
- International Standard for Radiant Heating and Cooling Panel Systems, June 29
- Field Performance Results of VRF, GSHP and GS-VRF Systems: The "Living LAB" Results Are In, June 29
- Outdoor Air and Energy Recovery for Energy Efficiency, June 30
- Best Practices in Sustainable Design around the Globe, July 1
- Important Factors for a High Performance Building, July 1
- Green Building Acoustics: Making Green Sound Good, July 1

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News

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2015 ASHRAE Handbook Focuses on Applications

ATLANTA – New chapters on smart building systems and moisture management in buildings are included in the 2015 *ASHRAE Handbook—HVAC Applications*.

The newly published *HVAC Applications* volume comprises more than 60 chapters with 1,200 pages covering a broad range of facilities and topics, written to help engineers design and use equipment and systems described in other Handbook volumes. Main sections cover comfort, industrial, energy-related and general applications, as well as building operations and management.

The 2015 edition includes two new chapters:

- Chapter 61, *Smart Building Systems*, covers smart systems and technologies for automated fault detection and diagnostics, sensors and actuators, as well as the emerging modernized electric power grid and its relationship to buildings and facilities.
- Chapter 62, *Moisture Management in Buildings*, addresses avoiding or reducing risks associated with damp buildings, with suggestions for architectural and HVAC system design, operation, and occupancy.

Other updates include:

- Chapter 1, *Residences*, has updated guidance on duct system design and communicating control systems.
- Chapter 4, *Tall Buildings*, has new content on supertall and megatall buildings; improved stack effect discussion and calculations; and new information on chilled beams, code references, split central plants, and elevator shaft pressurization.
- Chapter 8, *Health Care Facilities*, has been extensively revised to ANSI/ASHRAE/ASHE Standard 170-2013, *Ventilation of Health Care Facilities*, with new content on regulatory resources, hospital-acquired infections, sustainability and operations, as well as expanded text on control measures, outpatient care, isolation and bronchoscopy rooms, plus research results from ASHRAE Research Project-1343 on heat gain from imaging systems.
- Chapter 18, *Clean Spaces*, has extensive new content on demand control, computational fluid dynamics analysis, pharmaceutical manufacturing facilities, safety, environmental systems, installation and testing, and sustainability and energy conservation.
- Chapter 19, *Data Centers and Telecommunication Facilities*, has been completely rewritten for current best practices as covered in the books of the ASHRAE Datacom Series.
- Chapter 34, *Geothermal Energy*, has significant new content and examples on ground-coupled heat pump systems design, hybrid ground-source heat pumps, piping, pressure considerations, purging, deep boreholes, central plants, open-loop/surface-water direct cooling, and simulation.
- Chapter 49, *Water Treatment*, has major revisions on corrosion, deposition, microbiological growth and control, filtration and closed-loop systems, alternative water sources, Legionnaires' disease, thermal storage, and steam boiler systems.
- Chapter 53, *Fire and Smoke Control*, has been revised to align with ASHRAE's *Handbook of Smoke Control Engineering*, and includes many new figures and examples.

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This volume is being published in a bound print volume and in electronic format on a CD-ROM and online, in two editions: one using inch-pound (I-P) units of measurement, the other using the International System of Units (SI).

The new 2015 volume also is available as one of the four current volumes included in the ASHRAE Handbook Online. Members can subscribe for \$33 (list, \$289) and get immediate, searchable access to all four volumes in both I-P and SI units.

The cost of the 2015 *ASHRAE Handbook—HVAC Applications* print bound volume, which also includes the CD is \$209, in I-P or SI. The 2015 ASHRAE Handbook CD, which contains both the I-P and SI editions, costs \$189.

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.

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ASHRAE Announces Call for Papers for 2016 Annual Conference, June 25-29, St. Louis

ATLANTA – ASHRAE has announced a call for papers for its 2016 Annual Conference in St. Louis, Mo., June 25-29.

"The 2016 Annual Conference features a great mix of the engineering basics as well as advanced systems and professional development," Wade Conlan, chair of ASHRAE's Conferences and Exposition Committee, said. "In addition to the Fundamentals and Systems Tracks, there will be a Professional Skills Beyond Engineering track that focuses on the development of the business side of engineering. Two tracks that will push boundaries are Smart Building Systems as well as Renewable Energy Systems and Net Zero Buildings. And finally, we are going back to the core of air conditioning with a track on Advances in Refrigeration Systems and Alternative Refrigerants."

The increasingly relevant Renewable Energy Systems and Net Zero Buildings track delivers sessions on high energy efficiency and methods of design. The track addresses recent advances in alternative energy systems and equipment and new design strategies for achieving net zero buildings.

Exploring the wide range of refrigeration systems under development, the Advances in Refrigeration Systems and Alternative Refrigerants track places special emphasis on the use of alternative refrigerants in vapor compression machines to address environmental concerns.

The Smart Building Systems/Remote Monitoring and Diagnostics track covers advanced communication protocols, system integration, BMS tools, data management and analysis.

New engineers and veterans alike benefit from the Professional Skills Beyond Engineering track, which seeks to ensure professional skills are being developed and maintained beyond engineering essentials.

ASHRAE offers two types of paper submissions:

Conference Papers: Abstracts due Sept. 14, 2015. Upon acceptance, papers will be due Jan. 4, 2016. These "final" papers undergo a single-blind review, are submitted as a PDF and have an eight single-spaced page maximum length.

Full Technical Papers, which are due Sept. 14, 2015. Papers submitted for review must be both technically accurate and clearly written. These papers undergo a rigorous double-blind review and can be a maximum of 30 double-spaced pages.

To submit a Conference paper abstract or a technical paper and for more information about the conference, visit www.ashrae.org/stlouis.

The ASHRAE 2016 Annual Conference will take place in St. Louis, Mo., at the America's Center Convention Complex and Renaissance St. Louis Grand Hotel, June 25-29, 2016. The 2016 ASHRAE Annual Conference will attract some 2,500 attendees and meeting participants.

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Practical Energy Guidance to be Shared in ASHRAE Conference Technical Program

ATLANTA – Providing practical guidance for practitioners to use in saving energy is the goal of a track taking place at the ASHRAE 2015 Annual Conference.

The Conference is being held June 27-July 1, at the Atlanta Hilton, Atlanta, Ga. To register or for more information, visit www.ashrae.org/atlanta.

The Conference Technical Program features a strong focus on the design, construction and operation of high performance buildings, refrigeration and the annual Research Summit. Laboratories, refrigeration, fundamentals, applications, and systems and equipment round out the program. The program features some 100 sessions, with more than 300 presenters and 103 paper presentations.

Sessions in the **Moving Advanced Energy Design Guidance to the Mainstream** track highlight “advanced” energy design ideas with the goal of getting more people to use such ideas in their own projects.

“We wanted to give attendees practical guidance that they can use to move beyond the energy code,” track chair Paul Torcellini said. “We want attendees to leave the Conference, thinking ‘this is an actionable item that I can take back to my office to help my clients save energy.’”

Four of the sessions focus on the *Advanced Energy Design Guides* (AEDG) series. The six books in the series provide 30% and 50% energy savings when compared with the minimum code requirements of ANSI/ASHRAE/IESNA Standard 90.1, *Energy Standard for Buildings Except Low-Rise Residential Buildings*.

More than 561,000 copies of the books have been downloaded or purchased since first published in 2005. In 2008, ASHRAE began making the Advanced Energy Design Guide (AEDG) series available for free download at www.ashrae.org/freeaedg.

“The Guides serve as the foundation to provide designers with practical information to improve energy efficiency,” Torcellini said. “We’re not talking about experimental technologies.”

One of the sessions features a forum seeking input from attendees on how they use the AEDGs. The authors and the Society as a whole would like to know how attendees use the Guides so as to improve future editions. “How Do You Use the Advanced Energy Design Guides” takes place Monday, June 29.

Sessions in the **Moving Advanced Energy Design Guidance to the Mainstream** track are:

- Advanced Energy Design Guides and Beyond, June 28
- Optimization for Data Center and ITE Integration, June 29
- How Do You Use the Advanced Energy Design Guides?, June 29
- Panel Discussion: 10 Years of Advanced Energy Design Guides from Practitioners' Perspectives, June 30
- Ground Source Heat Pumps and Solar Together: Highest Energy Efficiencies Become Possible, June 30
- Innovation for Food Retail: The 50% Advanced Energy Design Guide for Grocery Stores, July 1
- Solar PV 101 for Designers, July 1