

# IOWASTALKS

A Newsletter for the Iowa Chapter of ASHRAE



## TOPICS THIS MONTH

- This Month at ASHRAE
- President's Corner
- October Recap
- Upcoming Meetings
- ASHRAE News
- Research Promotion

## THIS MONTH AT ASHRAE Student Night

**Date:** Monday, November 7<sup>th</sup>

**Location:** ISU Alumni Center  
420 Beach Avenue  
Ames, IA 50011

Buchanan Residence Hall  
2160 Lincoln Way  
Ames, IA 50013

**Schedule:** 5:30 - 6:30 Tour of Buchanan Residence Hall #2  
Please bring your own hard hat.  
6:30 - 7:00 Appetizers and Social Hour  
7:00 - 7:30 Business Meeting and Scholarship Presentations  
7:30 - 8:30 Appetizers and Social Hour

**Cost:** Free to ASHRAE Iowa Chapter Members  
\$15 for Guests

[Register](#) online by November 6<sup>th</sup>!



Alumni Center: Please park on the East side of the building.



Buchanan Residence Hall #2: There is limited parking near the construction site. Parking will be available at the Memorial Union parking ramp across the street. If you choose to walk, it is ½ mile from the Alumni Center.

# PRESIDENT'S CORNER:

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Greetings and Happy No-Shave November to those who participate! May your mustaches, beards and etc. grow wild and free!

The October meeting was an excellent start to our chapter meetings with great member turnout as well as an informative tour and presentation on the net-zero energy Market One building. Thank you to all who attended and especially to Harry Doyle and Modus Engineering for their time and hospitality.

Coming up this month is our annual student meeting in Ames. We will start off at 5:30PM with a tour of the new Buchanan 2 Residence Hall project. Parking will be limited in the area so give yourself some extra time to park and walk to the building. After the tour we'll meet back at the ISU Alumni Center at 6:30PM for drinks, appetizers and presentation of chapter scholarships. We've left extra time in this month's schedule for our professional members to interact with the student members so feel free to mingle! Make sure you register for the meeting on our website: [www.ashraeiowa.org](http://www.ashraeiowa.org)

The December meeting will be our annual joint lunch meeting with CSI and SMCI at the downtown Holiday Inn. This year's meeting will be on December 12th and will feature SMACNA's Executive Director of Technical Services, Eli Howard, speaking on Fire/Smoke damper selection, installation and service.

Hope to see you next Monday in Ames!

**Andrew Pospisal** ([email](#))  
**Iowa Chapter President 2016-2017**



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YEA  
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# PAST ASHRAE IOWA CHAPTER PRESIDENTS

Matt Gumm	2015-2016
Justin Barrett	2014-2015
Tim Conrad	2013-2014
Matt Jesson	2012-2013
Kelly Crow	2011-2012
Holly Elbert	2010-2011
Roger Leshner	2009-2010
Kit Cartwright	2008-2009
Jerrod Sieverding	2007-2008
Jason Kems	2006-2007
Chuck Heldenbrand	2005-2006
Jeff Gross	2004-2005
Ron Engelhardt	2003-2004
Dan Zaug	2002-2003
Susan Oltrogge	2001-2002
Christopher Nelson	2000-2001
Donald Swanson	1999-2000
Edward Truslow	1998-1999
James Hall	1997-1998
Robbin Vannoy	1996-1997
Mark Conway	1995-1996
Paul Melton	1994-1995
Gregory Maxwell	1993-1994
Jeffery Hammer	1992-1993
Jack Culp	1991-1992
James Lee	1990-1991
Clint Leonard	1989-1990
Charles Pedersen	1988-1989
Gary Reynolds	1987-1988
Dennis Hogan	1986-1987
Eugene Zefron	1985-1986
Donald Hagge	1984-1985
Robert Rist	1983-1984
Joseph Proctor	1982-1983
Mark Allen	1981-1982
Curtis Klaassen	1980-1981
Gerald Anderson	1979-1980
C.W. Miller	1978-1979
Richard South	1977-1978

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Verne Stewart	1976-1977
Curtis Hammer	1975-1976
Ralph Schilling	1974-1975
Donald Bonicamp	1973-1974
Kent Mosher	1972-1973
Thomas Van Hon	1971-1972
Robert McBride	1970-1971
William Whitman	1969-1970
Einar Dahl	1968-1969
Eugene O'Neil	1967-1968
James Green	1966-1967
Neil Hanson	1965-1966
Bob Flanagan	1964-1965
Lyndon Kelley	1963-1964
Elwood Giberson	1962-1963
Vern Polly	1961-1962
John Bain	1960-1961
Crom Campbell	1959-1960
R.T. Howard	1958-1959
W.A. Schworm	1957-1958
D.E. Schroeder	1956-1957
G.J. Kraai	1955-1956
W.E. Nanes	1954-1955
J.F. Sandfort	1953-1954
R.H. Schnell	1952-1953
C.H. McGuinness	1951-1952
R.S. Stover	1950-1951
D.E. Wells	1949-1950
D.C. Murphy	1948-1949
C.A. Wheele	1947-1948
E.O. Olson	1946-1947
B.E. Landes	1945-1946
W.W. Stuart	1944-1945
C.W. Helstrom	1943-1944
P.E. Triggs	1942-1943
Perry LaRue	1941-1942
R.A. Norman	1940-1941
Tracy Johnson	1939-1940
W.R. White	1938-1939

## October Meeting

October 12<sup>th</sup>, 2016

MODUS Engineering



We had a great turnout for the October meeting. Thank you to MODUS for the tours and Harry Doyle for his presentation, *Market One... Net Zero One Year Later*.

## YEA Meeting

October 25<sup>th</sup>, 2016

Fox Brewing



Another successful YEA event with plenty of pizza, beer, and good times.

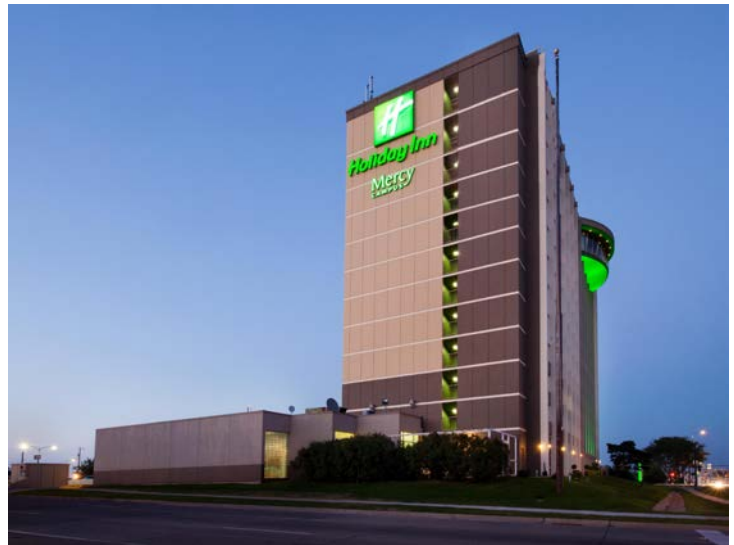
**December Meeting**  
**Joint Meeting with SMCI & CSI**

**Date:** Monday, December 12<sup>th</sup>

**Location:** Downtown Holiday Inn  
 1050 6<sup>th</sup> Avenue  
 Des Moines, IA 50314

**Agenda:** Lunch and Presentation

**Topic:** Fire / Smoke Damper Selection, Installation, and Service



More details to come!

**Future Meetings**

Month	Date	Location	Topic
September	29	Echo Valley Country Club	Fall Frolic Golf Outing
October	12	MODUS Engineering	Membership & RP Night
November	7	ISU Alumni Center	Student Night
December	12	Downtown Holiday Inn	SMCI & CSI Joint Meeting
January	11	Gilroy's	Refrigeration
February	22	Exile Brewing Company	Distinguished Lecturer
March	22	West Des Moines Marriott	Technical Session
April	20	TBD	ASHRAE Webcast
May	TBD	TBD	Spring Fling Golf Outing

January	28-1	Las Vegas, NV	2017 Winter Conference
April	20-22	St. Louis, MO	Region VI CRC
June	24-28	Long Beach, CA	2017 Annual Conference

## Industry News

### ASHRAE Publishes 2016 Version of Standard 90.1

Numerous energy-saving measures resulting from industry input are contained in the newly published ANSI/ASHRAE/IES Standard 90.1-2016, *Energy Efficiency Standard for Buildings Except Low-Rise Residential Buildings*. The 2016 version of the standard contains 125 addenda published since the 2013 standard. The new version includes technical changes to provisions regarding building envelope, lighting, and mechanical systems. Specific building systems affected include chilled water plants, DOAS, economizers, elevators, fenestration and lighting controls. The formatting of the standard also has been changed to make it easier to read and use. In addition, new annexes and tables link the standard to related documents, notably ANSI/ASHRAE Standard 169-2013, *Climatic Data for Building Design Standards*.

### Novel 3-D Printed Material Shrinks When Heated

LIVERMORE, Calif.—A research team led by Lawrence Livermore National Laboratory (LLNL) has developed 3-D printed materials with a unique property—instead of expanding when heated, they shrink. The bi-material microlattice structure is printed from polymer and a polymer/copper composite material that can flex inward, causing the structure to contract when exposed to heat over a range of tens to hundreds of degrees. Possible applications for the metamaterials, the researchers concluded, could come in securing parts that tend to move out of alignment under varying heat loads. "Traditionally, the way you compensate for (thermal mismatches) is with active control or heating and cooling," said principal investigator Chris Spadaccini, director of LLNL's Center for Engineered Materials and Manufacturing. "But what if you could design a material that would hold the object and passively adjust to local temperature changes?"

### Stored Snow Could Provide Cheap Cooling During Warmer Months

VANCOUVER, British Columbia—A recent study has found that snow cleared from roads during the winter can be used to help reduce summer air-conditioning use and expenses. The research team from the University of British Columbia (UBC) used computer modeling to find that directing a building's air-handling units through a snow dump—snow collected and stored from winter road clearing operations—can be an efficient and effective cooling method. The study included simulations for different sizes of buildings and accounted for different types of equipment needed in both conventional systems with industrial cooling units and snow-dump based systems, which insulate snow collected during the winter to use during the summer.

### Companies Tout Low-Grade Waste Heat as Energy Source for Data Centers

PLANO, Texas—A new partnership between data center colocation company Aligned Data Centers and Swedish energy company Climeon aims to harness low-grade waste heat and convert it into energy for data centers. The companies say that Climeon's heat recovery technology can be used to capture heat from water treatment plants, paper mills and electric utilities. Climeon's technology creates energy from low-grade waste heat, between 50°C and 70°C (120°F and 160°F). The technology is delivered in a module that only requires a hot water source, a cold water source and a power connection. The 150 kW generation unit has a footprint of only 4 m<sup>2</sup> (43 ft<sup>2</sup>). Incoming waste heat converts a working media from liquid to gas. The gas occupies more space than the liquid, creating pressurized gas that passes through a turbine to generate electricity.

## ASHRAE News

### Online Thermal Comfort Compliance Tool Included in Standard 55 User's Manual

The new user's manual for ANSI/ASHRAE Standard 55-2013, *Thermal Environmental Conditions for Human Occupancy*, includes a free online thermal comfort tool that can be used as the official tool for showing compliance with Standard 55-2013 and all of its published addenda. The online tool is available only to those who purchase *Standard 55 User's Manual* and can be accessed from any Internet-connected device. In all, the user's manual provides detailed information on the requirements of the standard. It includes tables, illustrations and examples to aid users in the design, commissioning, and measuring and rating of thermal comfort in buildings.

## Feature of the Week

### The Hidden Daytime Price of Electricity

By Evan Berger

According to the author, in a sense electricity demand charges serve as a peak-time adder for a typical nonresidential customer with a bell-shaped load curve, making energy twice as expensive during the day—or, looking at it from another perspective, half-off at night. Yet despite the outsized effect that demand charges have on commercial, industrial, and institutional customers, these costs are poorly understood by the entities who pay them. This article provides an overview of various "demand" charges, such as utility demand, grid demand, and rate structure-related costs. Also, it demonstrates how reducing peak demand and managing one's load curve can provide customers with opportunities to reduce costs.

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