

ASHRAE BLUEPRINT

March 2014

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PRESIDENT'S MESSAGE Rob Marshall

**Chapter Meeting: Wednesday, March 5th, 2014 @ Westward Ho
Social 5:00 PM, Dinner 5:30 PM, Program 6:00 PM**

**RSVP at the link below no later than 10 AM, Monday, March 3rd.
<https://www.surveymonkey.com/s/3HYGL6L>**

ASHRAE Members and Guests,

Eckhard Groll, Distinguished Lecturer from Purdue University, will be our guest speaker this month. We are very fortunate to have been allocated a second Distinguished Lecturer and to be having Dr. Groll as our speaker! Dr. Groll has received very high marks from other chapters, so mark your calendars and plan to attend. You can learn more about Dr. Groll and his presentation below, in the CTTC section of the Newsletter.

Also this month: Research RVC Scott Martin will be joining us to kick off our Research Promotion Campaign. Scott will be traveling from Colorado Springs to present on the importance of Research Promotion and how your donations have positively impacted the growth of the HVAC industry since 1919. By now, you should have received a letter from Society thanking you for your generous donations last year and asking that you consider donating again this year. The Society funds thousands of projects with topics such as sound, duct design, load calculations, and solar design, just to name a few. It is because of your generous donations that this research is able to continue moving forward. If you have any questions regarding Research, please contact RP Chair Ryan O'Connor or any of the board members.

We are currently accepting entries for the ASHRAE Technology Award. The ASHRAE Technology Awards program is an international program that recognizes successful applications of innovative design that incorporate ASHRAE standards for effective energy management, indoor air quality, and good mechanical design. If you have a project that you would like to showcase, please consider applying for this award. The winners will be highlighted via the ASHRAE Journal, press releases and ASHRAE Insights. Go [here](#) to learn more on this award.

Lastly, it's time to start thinking of our spring social events. Our annual fishing tournament will be held on May 3rd in Chamberlain. We have partnered with the Black Hills ASHRAE Chapter for the fishing tournament, so we hope to have a

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great showing this year. For more details and to get signed up for the fishing tournament, check out the Special Events section of the Newsletter. Our annual golf tournament is slated for May 30th at the Brandon Golf Course - more details will be coming in next month's Newsletter. Mark your calendars now to take part in both of these great events!

I hope to see you all at the Ho next Wednesday. As always, thanks for your continued support of the South Dakota ASHRAE Chapter.

Rob Marshall

CTTC **The CTTC position is open**



Eckhard A. Groll, Dr. Eng.
Purdue University
Ray W. Herrick Labs, 140 S. Martin Jischke Drive
West Lafayette, IN 47907
groll@purdue.edu

Speaker: ASHRAE Distinguished Lecturer Eckhard Groll
Title of Presentation: Review of Compression Concepts for Heat Pumping, Air Conditioning and Refrigeration Applications

The phase-out of CFC and HCFC refrigerants, combined with advances in compressor technology such as reduced noise and vibration and mechanical capacity control, has motivated the development of novel compression concepts for the refrigeration industry. This presentation provides an overview of several new developments for refrigeration, air-conditioning and heat pumping applications, including two novel compressors called the bowtie compressor and z-compressor. The bowtie compressor offers an integrated method of capacity modulation for use in domestic refrigerators/freezers. It modulates the cooling capacity by changing the piston stroke without changes of the clearance volume for better thermodynamic efficiency. The compressor is called bowtie compressor due to its two sector-shaped, opposing compression chambers forming a bowtie. The z-compressor is a dual-chamber hermetic rotary compressor with opposing upper and lower compression chambers separated by z-shaped blade. The compressor offers significantly lower noise and vibration levels than a conventional rolling piston compressor. In addition to presenting these new compressor types, research on flooded compression, miniature-scale compression, and compression processes with multi-port refrigerant injection will also be presented.

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Special Events

Jeff Horstmeyer

Please see the attached info on the fishing tournament.

Follow up on the Valentines Event:

ANOTHER GREAT VALENTINES EVENT – by Mark Grebner

If you missed the ASHRAE Valentines meeting at the Olde Towne Dinner Theater it was your loss. The food was excellent as always. I had the salmon. The show (The Savage Dilemma) was a comedy about the reputedly wealthy Mrs. Ethel Savage returning to the sheltered precincts of The Cloisters, seeking refuge among her former fellow patients. The Cloisters is about to close and Mrs. Savage comes up with a plan to kidnap herself and use the ransom money to keep it open. The related events were as insane as the patients. I believe a good time was had by all.

Membership

Keith Luke

If you know of anyone that may be interested in joining ASHRAE, be sure to tell them about ASHRAE and invite them to a meeting. Membership information can be found at www.ashrae.org/members/ or call Keith at 605-261-7086 with questions.

Grassroots Government Advocacy

Brian Miller

(Information provided from Mark Ames - ASHRAE's Government Affairs Office in DC)

Tenant Energy Efficiency Legislation Receives Bipartisan Approval by U.S. House Committee

Tenants can consume 50 percent or more of their buildings' total energy; as a result, the choices tenants and building occupants make significantly affect overall building efficiency. In recognition of this, the U.S. House Committee on Energy and Commerce recently approved the Better Buildings Act ([H.R.2126](http://www.congress.gov/bills/112/2126)) with strong bipartisan support from both Committee Chairman Fred Upton (R-MI) and the Senior-most Democrat of the Committee, Ranking Member Henry Waxman (D-CA).

The Better Buildings Act, also referred to as "Tenant Star", encourages landlords and tenants work together to improve energy efficiency by supporting best practices for high-performance tenant "fit-outs" that more closely meet tenants' needs without over-building. The Act would also establish a new voluntary "Tenant Star" program. Modeled after the highly successful ENERGY STAR label, this program would create energy efficiency recognition opportunities for commercial building tenants.

The Better Buildings Act would also encourage the U.S. General Services Administration (GSA) to develop model leasing provisions to help catalyze greater cooperation between private sector building owners and federal tenants on energy efficiency.

The Act is supported by a wide range of stakeholders and technical societies (including ASHRAE), who sent a [letter](#) to Committee on this bill.

The bill was introduced by Representatives David McKinley (R-WV) - one of the few engineers in Congress – and Peter Welch (D-VT). Representatives McKinley and Welch serve as the Co-Chairs of the [High-Performance Building Congressional Caucus](#), which was formed to heighten awareness and inform policymakers about the major impact buildings have on our health, safety and welfare and the opportunities to design, construct and operate high-performance buildings that reflect our concern for these impacts.

The Caucus is supported by the High-Performance Building Congressional Caucus Coalition (HPBCCC). The HPBCCC is a private sector group of over 200 organizations representing a uniquely [wide array](#) of stakeholders. The Coalition is Co-Chaired by Doug Read, ASHRAE's Director of Government Affairs and Dain Hansen, IAPMO's Vice President of Government Relations.

Congress Approves National Farm Bill – Contains Building Energy Efficiency Provisions

Earlier this week Congress gave final approval to the Agricultural Act of 2014, commonly known as the Farm Bill ([H.R.2642](http://www.congress.gov/bills/112/2642)). President Barack Obama is expected to sign the bill into law today.

The Farm Bill is a sprawling 357 pages, covering a wide range of areas – among them, building energy efficiency. In this area, the bill will require the U.S. Department of Agriculture (USDA) to submit a report to Congress that contains:

- An analysis of energy use by the USDA headquarters and major regional facilities.

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- A list of energy audits that have been conducted at such facilities.
- A list of energy efficiency projects that have been conducted at such facilities.
- A list of energy savings projects that could be achieved with enacting a consistent, timely, and proper mechanical insulation maintenance program and upgrading mechanical insulation at such facilities.

Energy Efficiency May Become Lower Priority in U.S. Senate Following Committee Leadership Change

Earlier this week the U.S. Senate confirmed Senator Max Baucus (D-MT) as the new U.S. Ambassador to China. As a result, Senator Baucus will leave the Senate – and his Chairmanship of the Senate Finance Committee. Senator Ron Wyden (D-OR) will become the new Finance Committee Chair and concurrently step down from his post as Chairman of the Senate Energy and Natural Resources Committee – the committee with jurisdiction over energy efficiency legislation such as [Shaheen-Portman](#).

Senator Mary Landrieu (D-LA) will become the new Chair of the Energy and Natural Resources Committee, and will likely encourage the Committee to work on issues most important to her and Louisiana. While Senator Landrieu supports energy efficiency, it is not one of her top priorities. Instead, she will likely be more focused on oil, gas, and related issues.

The change in Committee leadership certainly does not spell the end for energy efficiency legislation such as Shaheen-Portman, however some pressure for Senate action may be lost as Senators focus on their new leadership roles. The end result will be that energy efficiency proponents will have to work extra hard to get Shaheen-Portman passed in the Senate.

The 2013-2014 South Dakota Chapter ASHRAE Line-up:

Sept 12	Noon	Tom Meyer – Building Water Systems – Water, Water Everywhere. Which Drop to Drink? <i>ASHRAE Distinguished Lecturer</i>
Oct 2	Evening	Eric Ollerman, Data Center Systems Jay Ries, Liebert <i>Data Center Thermal Management Student Night / Membership</i>
Nov 6	Evening	Tony Tedder, ColdStream Software <i>Revit Past Presidents Night</i>
Dec 11	Noon	David Day, Ebtron – Airflow Monitoring
Jan 8	Noon	Joe Randolph – The Air We Breathe – The IAQ Impact of Filtration Camfil USA
Feb 15	Valentines Event	Olde Towne Dinner Theatre – “The Savage Dilemma” by John Patrick.
Mar 5	Evening	Eckhard A. Groll – Review of Compression Concepts for Heat Pumping, Air Conditioning, and Refrigeration Applications. <i>ASHRAE Distinguished Lecturer</i> Scott Martin, RVC – Research Promotion Night
April 2	Evening	Rod Hyatt – Solar Heating Systems Solar Skies Mfg., LLC. <i>Student Night/Events Center Tour</i>
May 3		<i>Fishing</i>
May 30		<i>Golf</i>