

THE HOT AIR DIFFUSER

Chapter Newsletter

DECEMBER 2015 Volume 22 Issue 4



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DECEMBER: Single Large Diffuser Technology

The December 2015 monthly Idaho ASHRAE meeting will take place at the Idaho Power headquarters. Kevin Schreiber from D&D Healthcare will be our guest speaker. Kevin Schreiber from D&D Healthcare. Single Large Diffuser (SLD) technology in surgical suites.

Rethinking the design of controlled laminar airflow in operating room systems using fully integrated modular systems to help reduce the incidence of health-care acquired infections (HAIs) and reduce construction timelines and jobsite coordination. For some preliminary information read the article in the February 2014 ASHRAE Journal by clicking [HERE](#).

When:
Wednesday, December 9th, 2015
11:45am to 1:00 pm MST

NOVEMBER: TAB

The November 2015 monthly ASHRAE meeting was hosted at Idaho Power. David Kirkham with Building Systems Technologies (BST) was the guest speaker. BST is a Testing, Adjusting, and Balancing (TAB) company as well as commissioning provider. Since TAB companies and commissioning authorities are usually the last entities on projects, they tend to find all kinds of "interesting" things. David will illustrate examples of such findings and discuss ways we can reduce the both the energy consumption and economic impact on projects.

ASHRAE, founded in 1894, is an international organization of some 50,000 persons. ASHRAE fulfills its mission of advancing heating, ventilation, air conditioning and refrigeration to serve humanity and promote a sustainable world through research, standards writing, publishing and continuing education.

DECEMBER CHAPTER MEETING



Please Register online at:
www.idahoashrae.com

Where:
Idaho Power
1221 W. Idaho St.
Boise, ID



INSIDE THIS ISSUE:

PAST PROGRAMS	1
PRESIDENT'S LETTER	2
HISTORY LESSON	3
NATIONAL CHAPTER NEWS	4-5
ADVERTISEMENTS	6-13

PRESIDENT'S MESSAGE

RUSSELL PRATT

Has anyone else noticed how hard it is lately to find entry level EIT's? It also seems to be difficult for contractors to find installers that have a good basic skill set to start with. Recently, I've found a few piping installation details that leave me scratching my head saying something like "really, you didn't know that a swing check can't be installed pointing down?" So, I did a little research and found that Dennis Technical-Education Center does not have an HVAC technician training program. I've also found that West Ada school district has a pre-engineering program at the Professional Technical Center. It does not have an architectural engineering program that would give kids a head start on a career in HVAC engineering.

I've seen a need and I want to assemble a team of key people with an interest in helping these two facilities. We need to help them create the programs we need to inspire an interest in this career path at an earlier age. We can use the resources we have at the chapter level to start and then leverage local industry support to build. If you agree and have an interest in getting involved, let me know. You can email me at russell.pratt@cshqa.com.

<http://www.westada.org/Page/22635>

<http://www.westada.org/Page/634>



HISTORY LESSON

NOVEMBER

Five Years Ago

The chapter president was Carl Marcum. was held on December 8, 2010, at the Doubletree Riverside. The program was on magnetic bearing, frictionless, centrifugal chiller systems. A short discussion of the impact of responsible use of refrigerants along with a chart of the newly revised Montreal Protocol Phase Out schedule was included.

Ten Years Ago

The chapter president was Bob Tikker. The meeting was a tour of Boise Locomotive, including their painting booth .

Fifteen Years Ago

The chapter president was Ben Kohler. The meeting was held on December 8, 2000, at the Doubletree Riverside. Dennis Bowns, Northwest Energy Efficiency Alliance, spoke about energy efficiency in design and selection of mechanical systems, and about possible rate changes and the issues facing our legislature.

Twenty Years Ago

The chapter president was Jon Mason. The meeting was held on December 8, 1995, at the Red Lion Riverside. Doug Cole, Chief of the Air and Toxics Section of the EPA Idaho Office, gave a presentation on EPA enforcement of air quality laws, rules, and regulations, and an update on CFC issues.

Twenty-Five Years Ago

The chapter president was Scott Richardson. The meeting was held on November 9, 1990, at the King's Table Restaurant. Al Terry, VP of Marketing for Rapid Engineering, Grand Rapids, MI, gave a presentation titled "Direct Fired Heating and the Pressurization Concept".

Twenty-Five Years Ago

The chapter president was Dave Asmus. The meeting was held on December 13, 1985, at the King's Table Restaurant. Gary Miner, Miner Financial Services, gave a presentation on successful investing.

NEWS FROM THE HOME OFFICE

DOE Updates Baseline for Federal Commercial and Multi-Family High-Rise Residential Buildings to Standard 90.1-2013

ATLANTA – The US Department of Energy (DOE) has published a final rule updating the baseline federal energy efficiency performance standards for the construction of new federal commercial and multi-family high-rise residential buildings to Standard 90.1-2013. This rulemaking goes into effect for such buildings that design for construction begins on or after November 6, 2016. Full information can be found by clicking [here](#).

DOE Amends Federal Register Following Court Settlement for Six Energy Conservation Regulations on Walk-In Coolers and Freezers

ATLANTA—The United States Court of Appeals for the Fifth Circuit vacated six energy conservation standards for walk-in coolers and walk-in freezers as a result of a settlement agreement reached by the litigants. Consequently, DOE recently issued an amendment to the *Federal Register* that reflects the court's order. For additional information, please click [here](#).

Supplemental Notice of Proposed Rulemaking Issued by DOE on Test Procedures for Central Air Conditioners and Heat Pumps

ATLANTA – The US Department of Energy is seeking public comment on its proposed changes to test procedures for central air conditioners and heat pumps. These changes include: a new basic model definition for central air conditioners and heat pumps, revised procedures to determine off mode power consumption, changes to the test procedure for test repeatability, and incorporation by reference of updated industry standards.

The proposed rule incorporates or otherwise discusses the following ASHRAE Standards:

- 23.1-2010 *Methods of Testing for Performance Rating Positive Displacement Refrigerant Compressors and Condensing Units That Operate at Subcritical Temperatures of the Refrigerant*
- 23.2 *Method of Test for Rating the Performance of*

Positive Displacement Compressors that Operate at Supercritical Pressures of the Refrigerants

- 37-2009 *Methods of Testing for Rating Electrically Driven Unitary Air-Conditioning and Heat Pump Equipment*
- 41.1-2013 *Standard Method for Temperature Measurement*
- 41.6-2014 *Standard Methods for Humidity Measurement*
- 41.9-2011 *Standard Methods for Volatile-Refrigerant Mass Flow Measurements Using Calorimeters*
- ASHRAE/AMCA 51-07/210-07 *Laboratory Methods of Testing Fans for Certified Aerodynamic Performance Rating*

Comments are due to DOE by December 9, 2015. For additional information, please click [here](#).

Federal Trade Commission Proposes Rule for Labeling Requirements for Certain Equipment

The Federal Trade Commission has issued a notice of proposed rulemaking that would create requirements related to a new label database on the DOE's website, redesign ceiling fan labels, update the comparability ranges for refrigerator labels, revise central air conditioner labels in response to new DOE enforcement requirements, amend water heater labels, and update current plumbing disclosures.

Comments are due on or before January 11, 2016. Full information can be found [here](#).

HUD Manufactured Housing Consensus Committee to Hold Call in Early December

The US Department of Housing and Urban Development's (HUD) Manufactured Housing Consensus Committee, Technical Systems Subcommittee will hold a public conference call on December 2, 2015 from 1:00 to 4:00 p.m. EDT. Agenda items include review of ANSI/ASHRAE 62.2 *Ventilation and Acceptable indoor Air Quality in Low-Rise Residential Buildings*. Full information can be found by clicking [here](#).

NEWS FROM THE HOME OFFICE CONTINUED...

ASHRAE Seeks College Student Applicants for Public Policy & Engineering Summer Internship in Washington, DC

Calling all college engineering students! Are you interested in exploring the intersections between engineering and public policy through an intense, hands-on summer internship in Washington, DC? If so, then you are encouraged to apply for the Washington Internships for Students of Engineering (WISE) program!

Founded in 1980 through the collaborative efforts of several professional engineering societies, WISE has become one of the premier Washington internship programs. Its goal is to groom future leaders of the engineering profession who are aware of and can contribute to the important intersections of technology and public policy. Students entering their final year of undergraduate study are selected each year in a nation-wide competition to spend nine weeks in the summer in Washington, DC. During the internship they learn how government officials make decisions on complex technological issues and how engineers can contribute to legislative and regulatory public policy decisions.

The program is open to US citizens and permanent residents. Applications are due December 31, 2015. For more information on the program, including the application, please click [here](#).

EWeek Slated for February 21-27, 2016

Engineers Week, an annual event celebrating its 65th anniversary this coming year, will be held February 21-27, 2016. According to the EWeek website, www.discovere.org, Engineers Week—the only event of its kind—is a time to:

- Celebrate how engineers make a difference in our world.
- Increase public dialogue about the need for engineers.
- Bring engineering to life for kids, educators, and parents.
-

Please watch ASHRAE's Government Affairs [webpage](#) as sample letters and proclamations for local governments will soon be posted for use.

California Passes Clean Energy Legislation

The legislature in California passed Senate Bill 350, the Clean Energy and Pollution Reduction Act of 2015. The primary focus of this bill requires:

- The amount of electricity generated and sold to retail customers per year from eligible renewable energy resources be increased from 22% to 50% by December 31, 2030.
- Other revisions to the Renewables Portfolios Standards Program and to certain other requirements on public utilities and publicly owned electric utilities.
- The State Energy Resources Conservation and Development Commission to establish annual targets for statewide energy efficiency savings and demand reduction that will achieve a cumulative doubling of statewide energy efficiency savings in electricity and natural gas final end uses of retail customers by January 1, 2030.
- The Public Utilities Commission to establish efficiency targets for electrical and gas corporations consistent with this goal so that local publicly owned electric utilities must establish annual targets for energy efficiency savings and demand reduction consistent with this goal.
- Transformation of the Independent System Operator into a regional organization, with the approval of the Legislature, pursuant to a specified process.

SB 350 codifies goals Governor Jerry Brown (D) laid out in his January 2015 [inaugural address](#) to double the rate of energy efficiency savings in California buildings and generate half of the state's electricity from renewable sources by 2030. For additional information on this legislation, please click [here](#).

States and Municipalities Join Together to Support the Clean Power Plan

California, Connecticut, Delaware, Hawaii, Illinois, Iowa, Maine, Maryland, Massachusetts, Minnesota, New Hampshire, New Mexico, New York, Oregon, Rhode Island, Vermont, Virginia, Washington and the District of Columbia along with the cities of Boulder (CO), Chicago (IL), New York (NY), Philadelphia (PA) and South Miami (FL), as well as Broward County, Florida have formed a coalition across the country to defend the [Clean Power Plan](#), which sets nationwide limits on greenhouse gas emissions from power plants. This coalition is in response to suits from other several states, coal companies and industry groups which have filed to block the new rules that are aimed at slowing climate change.

Information on EPA's Clean Power Plan can be found [here](#).

ADVERTISEMENTS

Online Advertising!!

Get your business card posted on

www.idahoashrae.com

*renewals are due now

Annual Business Card Ad on Website: **\$50**



Professional Development Hours

Professional Development Hours are now available at
ASHRAE monthly meetings!



ATTENTION: ASHRAE MEMBERS The Chapter is now accepting advertisements in the monthly newsletter. <u>Sponsorship Rates are as follows:</u>		
	Per Issue	Annual (9 issues)
Business Card	\$10.00	\$50.00
Quarter Page	\$25.00	\$200.00
Half Page	\$40.00	\$325.00
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Simple Advertisements Available For FREE!!

EXAMPLE:

Engineering Company-Mechanical Engineer I Position now open
Visit: www.engineeringcompany.com/.careers for more information

- For quarter, half, or full page job advertisements see above for pricing

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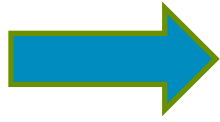
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- For quarter, half, or full page job advertisements see above for pricing

Issues registering for monthly meetings?



Please contact Katie Leichter @
kleichter@uidaho.edu

Interested in becoming more involved with your local
ASHRAE Chapter? Positions will be opening up soon!

Please contact Russell Pratt
@ russell.pratt@cshqa.com for
more information.







Request for Proposals (RFP)

i-STEM 2016 Strand Providers

A. Overview

We are currently seeking proposals from individuals interested in presenting a strand at the 2016 i-STEM Summer Institutes, where we will continue to focus on integrated STEM, the Common Core curriculum, and Next Generation Science (and Engineering) Standards. We are accepting proposals from individuals, groups, or organizations interested in presenting a theme based strand during the 2016 i-STEM Summer Institutes. Institutes will take place at the College of Southern Idaho (Twin Falls), Idaho State University (Pocatello), North Idaho College (Coeur d'Alene), College of Western Idaho (Nampa), Eastern Idaho Technical College (Idaho Falls), and Lewis-Clark State College (Lewiston). The strands (***week long short courses of about 20 hours of contact time***) are to be designed to increase the participating educators' STEM content and pedagogy knowledge as well as teachers ability to effectively integrate STEM and the practices of the [Idaho Core Standards](#) and the Idaho Science Standards which are based on the [Next Generation Science Standards](#) to assure our students are prepared for the workplace of today and tomorrow. Proposal submissions for presenters must be uploaded to the i-STEM web site at the following link prior to December 1.

<http://www.sde.idaho.gov/site/istem/teachers/events.htm>

The following are tentative sites and dates for the respective 2016 i-STEM Institutes:

North Idaho College: June 20-23
Lewis-Clark State College: June 20-23
Eastern Idaho Technical College: 21-24
Idaho State University: June 27- June 30
College of Southern Idaho: June 27- June 30
College of Western Idaho: June 27-30

B. Strand Provider Requirements

1. All Strand Providers must focus their content on integrated STEM themes or related concepts and model how teachers can integrate Math, Science, Engineering, Technology, Idaho Core Standards, and Next Generation Science Standards to meet the needs of their students and future workforce needs. In addition, strands should emphasize the 21st Century practices.
2. Each strand will provide about 25 hours of inquiry-based, project-based, STEM integrated, hands-on minds-on engaging instruction and curriculum, modeling and applying best instructional practices that are linked to Idaho Core Standards and Next Generation Science Standards. The 25 hours of curriculum will be integrated into the full conference agenda.



3. You and your participants will be receiving a video camera and movie editing software. You will be responsible for including this element in your stand. Describe how you will implement and embed this in your strand. Provide an activity idea you would embed.
4. Describe how you will work with strand participants and principals to follow up on strand content implementation during the school year. How are you preparing the strand participants to engage in the school year implementation and reflect on the outcome? (share video, reflection on video, suggested modification, and differentiation)
5. Strands will provide each participant in their respective strand a hands-on instructional kit, which includes activities and materials, valued at approximately \$200 to infuse lesson and activities taught during the institute. Funding for the kits will be provided by i-STEM. Kits will be distributed to the participants at the institute or their order for a kit (orchestrated by the strand provider, including shipping costs) will be completed at the institute.
6. Strand providers will be expected to attend a one day seminar organized by the i-STEM Center Committee at Boise State University after the first of the year (2016). This training is mandatory for all strand providers to clarify expectations, demonstrate lessons and activities, receive training on the device that will be given to participants, prepare for kit ordering, explain the research expectations, and answer questions. More information will be forthcoming to selected strand providers.
7. Curriculum strand providers are expected to integrate and participate in all conference activities and will be responsible for supporting institute planning time sessions.
8. If selected, strand providers will design a **content knowledge test** specific to the STEM content of their strands which will be submitted for review and administered pre- and post-strand instruction. Our goal is to document how the strand increases the participants' STEM content knowledge (knowledge of science, technology, engineering and mathematics). We will survey the participants to determine the impact on their content pedagogy.
9. All strands are expected to organize at least one off-site instructional **field trip** that supports the content in their respective strands. In the submission process, potential strand providers will need to describe the field trip they propose to use for their strand participants.
10. Each strand selected will need to **identify businesses and agencies** that may serve as business partners or co-presenters in their strands. (e.g. guest speakers, field trip suggestions, instructional material providers, in-kind support, etc.)
11. Each proposal must also identify three primary learning objectives that participants in their strand would accomplish and be able to immediately integrate into their instruction and curriculum.



12. All chosen strands will meet the following criteria:

1. **Inquiry Based Learning** activities are integrated throughout the program (hands-on / minds-on activities)
2. **Cross Curricular** application is included in the course based on a STEM theme
3. **Project Based** activities are integrated throughout program
4. **Assessment** of student learning will be discussed, proposed, refined, and planned
5. **Alignment** to Idaho Core Standards and Next Generation Science Standards particularly the *practices*.
6. **Model Integration** of STEM in the curriculum to meet a wide range of learning standards and objectives
7. **Focus on 21st Century Practices** which are aligned with the needs of society and the STEM workforce
8. **Connect to the Local Community**, using a place based approach to provide context for the STEM content

13. In April, strand providers are expected to contact registered participants in their respective strands with information such as strand lesson plans or overviews, contact information or related materials to review prior to the institute. More information on this requirement will be given at the training. Strand registration begins March 1.

C. Proposal Submission

During the electronic submission process the following are key items to pay attention to.

1. All proposals must include the following elements and be electronically submitted by December 1, 2015.
2. Name of the Strand with a clear description to help participants in the selection process. The description should include the **target audience and/or grade level** for that specific strand, such as; K-3, 4-6, 7-9, or 10-12. There is a first choice and second choice option.
3. A summary of the proposed strand (1-2 pages) and a draft agenda for the four (4) day institute. Include brief explanations of the activities participants will engage in to learn content material. These explanations should include:
 - ✓ Agenda for the four days (25 hours instruction)
 - ✓ Sample Lesson Plan
 - ✓ Strand Overview including daily objectives
 - ✓ Sample of pre and post outcome assessments
 - ✓ Any special classroom equipment needed
 - ✓ List of potential off-site field trips
 - ✓ Top 3 takeaways (goals) for participants
 - ✓ 5 key descriptor words for proposed strand



4. Describe how you will implement and embed the use of the video camera and editing software in your strand. Provide an activity idea you would embed.
5. Describe how you will work with strand participants and principals to follow up on strand content implementation during the upcoming school year.
6. List the strand's instructional kit contents and cost per individual items. Provide an explanation of how teachers will be trained in the institute to implement kit materials. Kit value should be approximately \$200 and should be distributed at the institute.
7. Explain how you will model effective integration of Math, Science, Engineering, Technology, Idaho Core Standards, and Next Generation Science Standards in your strand. We want you to talk and model effective cross curricular activities, practices, and strategies that will build teachers' capacity to effectively integrate STEM in their classrooms.
8. A short explanation on how you plan to integrate the practices of: STEM, Idaho Core Standards, Next Generation Science Standards, focusing particularly on the practices.

**For those strand providers who have presented multiple times at the same institute, please give consideration to presenting at a new location or presenting a new content strand.*

D. Proposal Submission Link

Individuals desiring to submit a proposal may do so by completing the application at the following link: <http://www.sde.idaho.gov/site/istem/teachers/events.htm> and uploading their submission automatically. If you have questions with uploading the application, contact Bill Cairns at cairbill@d91.k12.id.us for assistance, however, note all submissions must be completed at the above link.

