

ASHRAE Rochester



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VOLUME 4, ISSUE 7

MARCH 1, 2010

March ASHRAE Meeting (Joint Meeting with USGBC)

Monday, March 8, 2010

Location: Mario's Italian Steakhouse 2740 Monroe Ave, Rochester

Time: 12:00 – 2:00 PM with Lunch Served

Cost: \$25.00

Presenter: Hoy Bohanon

Please join us for our monthly ASHRAE meeting. This month we are pleased to recognize our membership for their dedication to our chapter.

Topic: How to implement Demand Control Ventilation and Comply with ASHRAE Standards

There will be 1.0 PDH credit available to those attending this meeting.

ASHRAE standards 90.1 and 189P require demand control ventilation in some instances. ASHRAE standard 62.1 allows demand control ventilation but places restrictions on its application. Many existing installations do not comply with the requirements of ASHRAE Standard 62.1. What is required and what strategies and technologies can be used to meet the requirements of all the standards?

What are requirements for DCV from 90.1-2007?

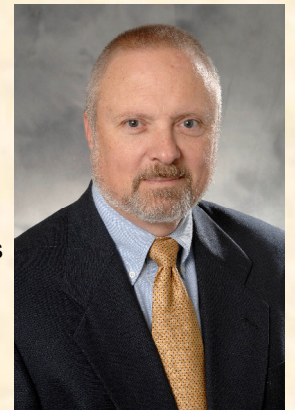
Typical spaces
Typical buildings

What are requirements for DCV from 189.1-2010?

Typical spaces
Typical buildings
CO2

What are the restrictions on DCV from 62.1-2010?

Minimum ventilation required – how much, when, and delivery options
When can ventilation be reduced?
What are the procedures for determining ventilation?
What are the limitations of CO2 as a tool for controlling DCV?
What are other technologies and approaches?



Hoy Bohanon, PE, LEED AP is director of the Carolinas region of Working Buildings. Working Buildings is a professional services firm whose primary service offering is commissioning for high performance buildings. Mr. Bohanon began his engineering career as a research and design engineer, then gained experience as a project engineer, facilities engineer, facilities manager, indoor air quality research engineer, environmental engineer and business owner. He has a master's degree in engineering from North Carolina State University, and a bachelor's degree in mechanical engineering from Georgia Institute of Technology.

RSVP by noon Thursday, March 4th to Ed Burns, Phone: 585-872-6681 or ejb@mechtechvac.com

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ASHRAE 2009/2010 MEETING SCHEDULE

| DATE | EVENT | LOCATION | SCHEDULE |
|------------------------------|--|-----------------------------------|--|
| 3/8/2010 Membership Night | Hoy Bohanon, PE ASHRAE Distinguished Lecturer How to implement Demand Control Ventilation and comply with ASHRAE Standards | Mario's | 12:00-2:00 PM Lunch |
| 4/19/2010** | Refrigeration Night—Tour of Perry's Ice Cream | Perry's Ice Cream—Akron Dinner | TBD |
| 5/18/2010 | Annual ASHRAE Golf Outing and Picnic | Ravenwood Golf Club | 8:00 AM Golf 2:00 PM Picnic 6:45 PM Dinner |


** Date Change from previous calendar



Attention Members:

Just a reminder that all members that reserve a spot for the monthly meeting will be responsible for that reserved space. Members have until 12:00 pm the day of the RSVP deadline to cancel their meeting reservation. Failure to comply with this rule will result in the attendee being responsible for the payment of that reservation.

ASHRAE Rochester Chapter Officers



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.



“Advancing HVAC&R to serve humanity and promote a sustainable world”

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 by: Jeff Davis

Last month, the ASHRAE Rochester Chapter gathered at the Inn on Broadway, formerly the University Club for our annual Valentine's Dinner Dance. The event was organized by Jody and Matt McGarry, and as always, it was a fantastic event! Events such as this are successful due to the tremendous support of our sponsors, and I thank them for helping to make this possible. Also, thank you Jody and Matt for once again stepping up and putting the Dinner Dance together.

Our Chapter meeting last month took place at Rochester Institute of Technology, hosted by Carl Lundgren where we learned about many of the new programs our future engineers have access to. We learned about the Sustainability Institute which is a PhD program where students will engage in in-depth study of sustainable design of buildings, sites and building renovations. We learned about applied research in the Mechanical Engineering Technology Department. One issue they are currently researching is occupant comfort in the new College of Applied Science and Technology (CAST) building, which is being adversely affected by the differing solar loads through the windows. Those of you who attended the tour of the

CAST building last year recall the large amount of glass that allowed daylighting, resulting in reduced lighting levels. We also were given the opportunity to tour the diesel engine testing lab where we learned about research into such sustainable fuels as bio-diesel and hydrogen. Finally, the Student Chapter gave us a virtual tour of all of their activities. It was nice to see the duct and pipe test labs which represent a lot of work on the part of Al Rodgers, Ron Amberger, and many Rochester area vendors and contractors. The labs were made possible by ASHRAE Grant dollars allocated to each Region. Thank you Carl for this opportunity. I speak on behalf of all of the alumni present when I say that it was very encouraging seeing all of the excellent things going on at RIT!



Jeff Davis, PE, 2009-2010 President



SAVE THE DATE...

Monday, April 19, 2010—April Meeting—Refrigeration Night

Location: Perry's Ice Cream—Akron, NY

Time: TBD with Dinner Served

Cost: \$25.00

Presenter: Eliot Nicholas, Mollenberg Betz

Topic: Tour of Refrigeration Plant

Note: We are exploring the possibility of providing group transportation to this meeting (Bus or Van). If this is of interest to anyone, please notify Mike Nohle (Refrigeration Chair) at mikenohle@aol.com



53rd Annual ASHRAE Valentine Dinner Dance

On Friday, February 5, 2010, ASHRAE hosted their 53rd annual Valentine Dinner Dance. This year's event, held at the Inn on Broadway, was an evening filled with great music, delicious food, and lots of fun! Allan Howe and Friends provided the perfect soundtrack to compliment the charming and intimate setting offered at the Inn, and the 80 guests enjoyed dinner and dessert catered by Tournedo's Steak House. Sweet Creations provided decadent sweets to compliment the evening. A big thank-you goes out to our 21 corporate sponsors that made this event possible, and of course, thank you to Jody and Matt McGarry for organizing another extraordinary event! See you next year!

Sponsors for the Valentine Dinner Dance 2010

Air Systems Balancing & Testing Service, Inc.
 American Metal Products
 ABR Wholesalers, Inc.
 Bergmann Associates
 Cogenic Mechanical
 Crosby-Brownlie, Inc.
 Day Automation Systems, Inc.
 E.D.S. Mechanical Services
 R.P. Fedder Corporation
 Gray Metal Products, Inc.
 Guckian Energy Systems, LLC
 Integrated Facility Systems, Inc.
 Isaac Heating & Air Conditioning, Inc.
 R.L. Kistler, Inc.
 LaBella Associates, P.C.
 M/E Engineering, P.C.
 Monroe Piping & Sheet Metal, LLC
 Pathfinder Engineers & Architects, LLP
 R.F. Peck Co., Inc.
 Sheet Metal Workers' International Association
 V.J. Stanley, Inc.



Student Activities



Student Activities

I am looking for Fundamentals volumes (or any older Guide and Data books) for the R.I.T. students.

Many thanks to Carl Lundgren and the RIT Student Chapter for a great presentation at the February Chapter meeting.

As I said at the meeting, the following companies supported the lab equipment that was shown:

Crosby-Brownlie supplied the Airflow System Lab ductwork and fittings

R.F Peck supplied the Airflow System Lab utility fan

J. W. Swanson and Associates supplied the Airflow System Lab monitoring stations

T. H. Herman supplied the variable speed drives on the Airflow Lab and the Pipe Flow Lab

Piekunka Systems supplied the water source heat pump and the heat recovery unit

V. J. Stanley supplied the pumps and piping trim for the Variable Speed Pump system.

Thanks should also go to Carl for his work with the students as Student Chapter Faculty Advisor.

Last but certainly not least, thanks to Ron Amberger, Professor Emeritus at RIT, for his work with the students, Carl and myself over the years to develop these labs and work on the system instrumentation. Ron completed the funding applications for all these labs, and the students would not have the apparatus they do now without his work.

Regards,

AI

AI Rodgers, 2009-2010 Student Activities Chair

Save the Date...

ASHRAE Picnic & Golf Outing

Tuesday, May 18, 2010



RAVENWOOD
GOLF CLUB

ASHRAE

Researching Today to Change Tomorrow

Research Promotion

We are past the half way mark for this year's research promotion campaign and looking to make a strong finish with the continued support from last years ASHRAE Research donors and new potential donors. Since 1919, the American Society of Heating, Refrigerating and Air-conditioning Engineers has supported research to improve quality of life. ASHRAE Research impacts the industry by advancing the way HVAC&R systems work and the way in which they are applied. These projects benefit each of us in many ways. For example, results from the research program help shape and revise the ASHRAE Handbook, ASHRAE standards, and develop new design guides, used by professionals like us. We are already making strides to hit our 2000-10 research campaign goals for the Rochester Chapter and hope we can count on the support of all of our past contributors and new contributors to generously support ASHRAE Research.

2009-10 Rochester Chapter Research Donors

| | | | |
|---------------------------------------|-----------------------|-----------------------|------------------|
| R P Fedder Corporation | Major Donor - Bronze | Mr Ronald C Mead | Honor Roll Donor |
| Slater Equipment Company Incorporated | Major Donor - Antique | Ms Michelle Sommerman | Honor Roll Donor |
| H M Cross & Sons Incorporated | Major Donor - Antique | Mr Jeffrey S Close | Honor Roll Donor |
| Ms Lynn G Bellenger | Major Donor - Antique | Mr Peter Oppelt | Honor Roll Donor |
| Mr William C. Schmitt | Honor Roll Donor | Mr Charles G White | Individual Donor |
| Mr Jeffrey M Davis | Honor Roll Donor | Mr Aldo F Fioravanti | Individual Donor |
| Mr James C Browe | Honor Roll Donor | Mr Robert A Walton | Individual Donor |
| Mr Thomas E Piekunka | Honor Roll Donor | Mr Richard Morelle | Individual Donor |
| Mr Jeffrey C Ellis | Honor Roll Donor | Mr James R Brennan | Individual Donor |
| Mr Robert Wind, Jr | Honor Roll Donor | Mr Larry Smith | Individual Donor |

* Updated 02-01-2010

If any one is interested in donating, but doesn't know where to begin, please contact me.

Jeffrey Close - *Research Promotion Chair*

jeff.close@pres-services.com

Jeffrey Close, 2009-2010 Research Promotion Chair

Commissioning Webcast - April 21, 2010, 1pm - 4pm EDT

Why do I need Commissioning? Why should Commissioning start in the design phase? How can I avoid or reverse building performance decay? How does Commissioning improve ROI? Get answers to these questions and tools to commission your next building by participating in the ASHRAE Webcast, "**Right from the Start—Commissioning for High Performing Buildings.**" Register and access this free webcast via the Internet on April 21, 2010, from 1 to 4 p.m. EDT. The program is sponsored by ASHRAE's Chapter Technology Transfer Committee with support from the ASHRAE's *High Performing Buildings Magazine*.

Online registration begins **March 2nd** at www.ashrae.org/Cxwebcast.

Three (3) Professional Development Hours (PDHs) or three (3) AIA Learning Units (LU's) may be awarded to viewers who complete the "Participant Reaction Form" online by **April 30, 2010**. Chapters may also earn 100 Presidential Award of Excellence (PAOE) points for hosting the webcast.

Information about the program and a media kit to assist chapters with promotion are available at www.ashrae.org/Cxwebcast. Please watch for updates via *ASHRAE Insights* and www.ashrae.org.

If you have questions, call (678) 539-1200 or email ashrae-webcast@ashrae.org.



Rochester Chapter – ASHRAE CTTC Committee Technology Awards Submissions

ASHRAE Technology Awards are the HVAC&R industry's most prestigious honor for efficient energy use in buildings and environmental system performance.

The Rochester Chapter Technology Transfer Committee is seeking Technology Award submissions from *all* Rochester chapter members.

Technology Awards recognize ASHRAE members for innovative design, highlight technological achievements and showcase local projects to other ASHRAE members.

Categories include new or existing;

Commercial Buildings
Institutional Buildings
Health Care Facilities
Industrial Facilities

Public Assembly
Residential
Alternative or Renewable Energy Use.



Short form applications should be submitted for local chapter judging by April 15, 2010. Local winners will be selected for regional judging and will be submitted by May 15, 2010. Regional winners prepare a long form submission by September 1, 2010 for submission to Society. Society winners are presented at the Plenary Session of the Society's Winter Meeting.

Please contact me for additional information on submitting your Technology Award Short Form application, or download it at:

<http://www.ashrae.org/members/page/1646>

Carlos Dachary
ASHRAE Rochester Chapter Technology Transfer Committee
cdachary@spc-ny.com
585 943-2456

Please join us for the 2010 Summer Region 1 dinner!

High Finance Restaurant

More info on the restaurant is available here: <http://www.sandiapeakrestaurants.com/highfinance/>

Please be at the Tram Lift (\$13 - included in the \$50 cost!) by 5:30pm. The Tram holds up to 50 and it runs about every 20 minutes.

If you wish to carpool to The Peak via a shared taxi or with your rental car, please let me know in your RSVP, & I'll put people together. Please RSVP by June 22, 2010, via the link below. The reservations for this event will be via e-mail link on the Region I webpage http://www.ashraeregion1.org/region_i_dinner.htm

R.S.V.P. Today

Thanks!
Steve Rosen

Directions:

FROM I-40

Exit 167: Tramway Blvd., take Tramway Blvd. North approximately 9 miles to Tramway Rd. Take Tram to The Peak where High Finance is located.

FROM I-25

EXIT 234: EXIT 234 Tramway Road. Follow Tramway Road, East to the Sandia Peak Tramway. Take Tram to The Peak where High Finance is located.

Tossed Mixed Greens Or Cup of soup
GRILLED FILET OF SALMON
 Served on basmati rice, vegetable du jour & A Serrano-mango gastrique
CHICKEN FLORENTINE
 Chicken breast stuffed with roasted bell peppers, spinach & Boursin cheese, served over a bed of fettuccine alfredo & Served with vegetable du jour
HERB MARINATED SIRLOIN CAP
 Over Boursin cheese potato puree, Vegetable du jour and roasted garlic butter
STIR FRY
 Stir fried vegetables with choice of beef, chicken or shrimp Served over a bed of basmati rice
DESSERT
 Fresh Brewed Coffee, Tea or Soda

Cost is \$50 per person
 Cost includes tax, gratuity & round trip Tram Ride

The only restaurant located at the top of Sandia Peak!
 (Menu subject to slight modifications)

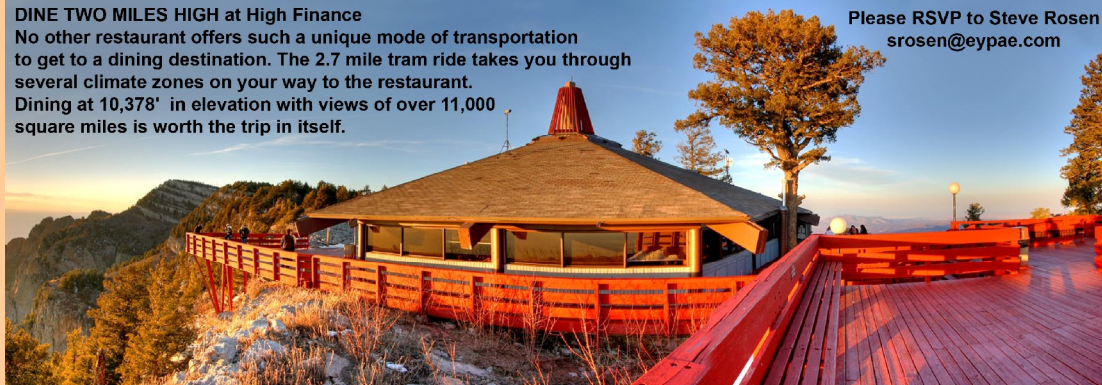
Region 1 Dinner

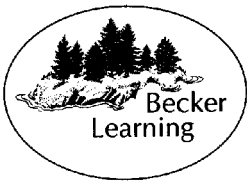
Sunday June 27, 2010 - 6:00pm

ASHRAE Summer Meeting - Albuquerque, NM

DINE TWO MILES HIGH at High Finance
 No other restaurant offers such a unique mode of transportation to get to a dining destination. The 2.7 mile tram ride takes you through several climate zones on your way to the restaurant. Dining at 10,378' in elevation with views of over 11,000 square miles is worth the trip in itself.

Please RSVP to Steve Rosen
srosen@eypae.com





Your technical training provider presents

Air Conditioning Fundamentals 2010

10

Target Audience: Any engineer, designer, technician, or assistant who wants to broaden their base in the fundamentals, will greatly benefit from this training.

Primary Benefit: Students will enjoy learning as much practical knowledge as possible about Air Conditioning Fundamentals. Students won't waste a great deal of time in theory. The typical student can immediately apply what he/she learns. Past attendees have boosted their overall confidence and found many ways to apply their recently acquired knowledge.

2010 Course Offerings (Rochester, NY): (all classes are 3-days; Tuesday - Thursday)

- [] Mar 16-18 'Airsides Fundamentals- II' (Duct Design, Fans & Fan Laws, Acoustics and IAQ)
- [] Apr 13-15 'Refrigeration Fundamentals' (Refrig Basics, Refrig Piping, Refrig & Our Environment)
- [] May 11-13 'Systems Fundamentals' (HVAC Systems, Dehumidification, Ice Storage, Heat Recovery, etc...)
- [] Aug 10-12 'Energy Efficient Design Fundamentals' (Chilled Wtr, DX, VAV, Dehumidification)
- [] Sep 14-16 'Product Fundamentals' (AHU, WSHP, RTU, Chillers, Fan Coils, UV)

Note: For more information about each of these classes, log onto BeckerLearning.com

Registration Deadline: Each course will be filled on a first-come-first-reserved basis.

Payment Deadline: Complete Payment must be received prior to the start of the class.

Contact: Joe Becker, Becker Learning / 5980 Sheppard Road / Dansville, NY 14437
Phone: (585) 317-0000 Email: Joe@BeckerLearning.com



More Details for 3- day courses:

Where: The specific Henrietta, NY location (immediately south of Rochester, NY) will be decided at least 30-days before the class & all attendees will be emailed all appropriate information in time to make hotel reservations.

Time: We will start each morning at 8:00 AM and end by 5:00 PM (except Thursday when we end by 4:00 PM)

Food: Lunch, mid-morning and mid-afternoon snacks & drinks are provided.

What is not included: Transportation, other meals & lodging.

Travel: Arrival: Since the seminar starts at 8:00 a.m., plan to arrive the night before.

Departure: You can book flights out of Rochester International Airport as early as 5:15 p.m. on Thursday since our Henrietta, NY location is less than 10-minutes from the airport.

The **registrations received by March 2, 2010** will lock in the facility for Airside Fundamentals-II based on the number of attendees. Please don't miss out!

Governmental Affairs Update

Welcome to ASHRAE's Government Affairs Update. Along with the redeveloped Government Affairs webpage, these periodic e-mail updates feature information on government affairs related activities of interest to ASHRAE members and others interested in the built environment. Archives of previous updates are available from the government affairs webpage (<http://www.ashrae.org/advocacy>).

Please pass this information on to interested colleagues who also may subscribe from the ASHRAE Government Affairs webpage. Should you wish to unsubscribe, information appears at the end of this e-mail.

If you have any recommendations regarding content, or have questions about or would like to participate in Washington Office activities, please contact ASHRAE Government Affairs staff at (202) 833-1830 or washdc@ashrae.org.

ASHRAE Government Affairs Update, 2/18/10

- [US Wind Energy Industry Installed Nearly 10,000 MW in 2009](#)
- [US Geothermal Energy Capacity Grew 6% in 2009](#)
- [SEC: Business Should Disclose Climate Change Impacts](#)
- [Administration Launches \\$130 Million Building Energy Efficiency Effort](#)
- [SMUD Receives Huge Response to it's Renewable Energy Feed-in-Tariff](#)
- [DOE Guides Data Centers in Standardizing Energy Efficiency Metrics](#)



[US Wind Energy Industry Installed Nearly 10,000 MW in 2009](#)

The U.S. wind industry installed nearly 10,000 megawatts (MW) of new wind turbines in 2009, increasing its generating capacity by 39%, according to the American Wind Energy Association (AWEA). The industry group credited the American Recovery and Reinvestment Act for the record-breaking year, which topped 2008 by nearly 19%. AWEA's fourth quarter report places wind power neck-and-neck with natural gas as the leading source of new electricity generation for the country. Together, the two account for about 80% of the new capacity added in the country last year. The new wind capacity is enough to serve more than 2.4 million homes. See the AWEA press release (http://www.awea.org/newsroom/releases/01-26-10_AWEA_Q4_and_Year-End_Report_Release.html) and the AWEA 2009 report (<http://www.awea.org/publications/reports/4Q09.pdf>).

Globally, wind power capacity grew by 31% in 2009, adding 37.5 gigawatts (GW), according to the Global Wind Energy Council (GWEC). China added a third of the additions, growing from 12.1 GW in 2008 to 25.1 GW in 2009. That's an increase of 13 GW, about 31% greater than the wind capacity growth in the United States. The fast pace landed China in third place for total installed wind capacity, falling just behind Germany, but still about 10 GW behind the United States. Overall, the main markets driving worldwide growth continue to be Asia, North America, and Europe, each of which installed more than 10 GW of new wind capacity in 2009. See the GWEC press release (http://www.gwec.net/index.php?id=30&tx_ttnews%5bttnews%5d=247) and supporting tables (http://www.gwec.net/fileadmin/documents/PressReleases/PR_2010/Annex%20stats%20PR%202009.pdf).

[US Geothermal Energy Capacity Grew 6% in 2009](#)

Geothermal energy capacity expanded 6% in the United States in 2009, due to six new geothermal plants which came online, adding 176.68 megawatts (MW). Three projects came into service in Nevada, with one apiece in California, Oregon, and Utah. The total online capacity in the U.S. reached 3,152.72 MW as of August 2009, according to the Geothermal Energy Association (GEA), an industry trade association.

There is further expansion on the horizon. GEA has identified 6442.9 MW of new U.S. geothermal power plant capacity under development, though some of those may not go forward. However, there are seven projects with an estimated 125 MW of capacity that have drilling and facility construction underway. Those projects include two in California, totaling 85 MW; one in Florida generating 0.2-1.0 MW; three in Nevada, totaling 39.4 MW; and one in Oregon producing 0.2 MW. The Florida and Oregon projects will be the first geothermal projects in those states. One of those projects—at Jay Oil Field in Florida—will use the hot water produced by oil and gas wells to generate power. Two such projects started up in Louisiana and Mississippi in 2009, and more are planned for Louisiana, Nevada, and Wyoming. See the GEA press release (http://www.geo-energy.org/pressReleases/Year-end_release_-_December_14_2009.pdf), the GEA report update (http://www.geo-energy.org/GEA_January_Update_Special_Edition_Final.pdf), and the Web site for DOE's Geothermal Technologies Program (<http://www.eere.energy.gov/geothermal/>).

Governmental Affairs Update (continued)

SEC: Business Should Disclose Climate Change Impacts

The Securities and Exchange Commission (SEC) issued "interpretive guidance" to companies on January 27 to indicate how companies should handle the impacts of climate change in their financial disclosures. While the SEC guidance does not create new legal requirements, it points out where companies could be liable if they fail to disclose potential climate change impacts. Specifically, the SEC directs companies to consider the impacts of existing laws and regulations regarding climate change, and in certain circumstances, the potential impact of pending legislation or regulation. Companies should also consider the impacts of international accords, the indirect consequences of climate change regulation or business trends (which might create new opportunities or risks), and the actual and potential physical impacts of climate change on their businesses. See the SEC press release (<http://www.sec.gov/news/press/2010/2010-15.htm>).

Administration Launches \$130 Million Building Energy Efficiency Effort

The Obama Administration announced a multi-agency initiative to spur regional economic growth while making buildings more energy efficient. Seven federal agencies issued a combined Funding Opportunity Announcement (FOA) of up to \$129.7 million over five years to create a regional research center. The center will develop new building efficiency technologies and work with local partners to implement the technologies in area buildings. DOE is providing up to \$22 million for this project in the first year, and as much as \$100 million over the next four years. The agencies are working together to leverage funding and resources to promote regional growth through an Energy Regional Innovation Cluster (E-RIC) that is centered on an Energy Innovation Hub. The hub, one of three funded by Congress in fiscal year 2010, is focused on developing new technologies to improve the design of energy-efficient building systems.

The E-RIC will be based at a university, DOE national laboratory, nonprofit organization, or private firm. The entity will partner with local or state government officials, drawing on the expertise of local architects, builders, and manufacturers. In addition to DOE, the agencies participating include the U.S. Department of Commerce's Economic Development Administration and Commerce's National Institute of Standards and Technology; the Small Business Administration; the National Science Foundation; and the U.S. Departments of Labor and Education. They will work together to leverage this funding with regional sources. Because buildings account for nearly 40% percent of U.S. energy consumption and carbon emissions, this initiative is designed to provide an array of benefits, which include reducing energy use, lowering utility bills, and decreasing carbon emissions. See the DOE press release (<http://www.energy.gov/news/8637.htm>), the Energy Regional Innovation Cluster Web site (<http://www.energy.gov/hubs/eric.htm>), and the FOA (http://www.energy.gov/hubs/documents/ERIC_FOA.pdf).

SMUD Receives Huge Response to it's Renewable Energy Feed-in-Tariff

A California utility's feed-in tariff (FIT) program for renewable or combined heat and power generating facilities met with an overwhelming response last month. The Sacramento Municipal Utility District (SMUD) reported that applications for the new FIT, which were all for solar photovoltaic power, exceeded its 100-megawatt allotment. SMUD lists only five applicants for the new program, and they are all commercial entities. The program, approved in September 2009, is designed to remove barriers to interconnection with the utility by providing standard rates and contract conditions that make it easier for SMUD and its power-generating customers to do business. For example, for contracts signed in 2010, SMUD customers with photovoltaic systems will be paid on average \$0.0968 per kilowatt-hour (kWh) for a 10-year contract, \$0.1040 per kWh for a 15-year contract, and \$0.1107 per kWh for a 20-year contract. Applications must include \$1,400 for the Interconnection Review Fee and a deposit of \$20 per kilowatt, and each system is limited to 5 megawatts in capacity. See the SMUD press release (<http://www.smud.org/en/news/Documents/10archive/FIT-response-1-19-10.pdf>) and Feed-In Tariff Web page (<http://www.smud.org/en/community-environment/solar-renewables/pages/feed-in-tariff.aspx>).

FITs, which are widely used in Europe, face regulatory constraints in the United States. However, according to a January 2010 report from DOE's National Renewable Energy Lab (NREL), the path for states seeking to provide legal FITs is tricky, but possible. The report, "Renewable Energy Prices in State-Level Feed-in Tariffs: Federal Law Constraints and Possible Solutions," concludes that states can offer feed-in tariffs, but need to create them in such a way as to meet federal requirements under the Public Utility Regulatory Policies Act of 1978 and the Federal Power Act of 1935. The report describes several possible ways for states to proceed to create incentives for renewable energy. One suggestion is for payments based on cost of generation, in keeping with federal limits, but then adding incentives on top of that cost through subsidies, Renewable Energy Credits, or state tax credits. The report notes that given the legal uncertainties, state regulatory groups should consider getting advice from the appropriate federal agencies. See the NREL report (<http://www.nrel.gov/docs/fy10osti/47408.pdf>).

Governmental Affairs Update (continued)

DOE Guides Data Centers in Standardizing Energy Efficiency Metrics

The U.S. Department of Energy (DOE) joined with the Environmental Protection Agency (EPA) and industry leaders (including ASHRAE) to announce a breakthrough agreement on energy efficiency measurements, metrics, and reporting conventions for data center facilities. As data center usage continues to escalate and energy costs rise, energy efficiency has become a growing concern for data center owners and operators. There has been no standard approach for such key questions as how to measure energy usage, where to take the measurements, and how frequently to do the measuring. As a result, data center operators have difficulty identifying energy usage problems as well as potential solutions.

The new agreement provides guiding principles for data center operators to gauge energy use and create opportunities for improved energy performance. By providing clear direction for data center energy management, the groups participating in the agreement hope to spur data center operators to improve their measurement practices leading to higher efficiency and reduced energy consumption.

Given the rapidly increasing number of data centers nationwide and the steady growth in size and corresponding electricity demand of individual data centers throughout our economy, improving the energy efficiency in data centers is an important part of reducing overall energy use in the Information and Communications Technology sectors. The progress made in this agreement will also support the Department of Energy's broader goal of reducing industrial energy intensity 25% over the next 10 years.

Organizations that collaborated in the effort to develop these guiding principles include the 7x24 Exchange, ASHRAE, The Green Grid, Silicon Valley Leadership Group, DOE's Save Energy Now and Federal Energy Management Programs, the U.S. Environmental Protection Agency's ENERGY STAR® Program, the United States Green Building Council, and the Uptime Institute.

More information on the agreement and its guiding principles can be found in the press release (http://www1.eere.energy.gov/industry/datacenters/news_detail.html?news_id=15799).

The guiding principles include:

- Power Usage Effectiveness (PUE) using source energy consumption is the preferred energy efficiency metric for data centers. PUE is a measurement of the total energy of the data center divided by the IT energy consumption.
- When calculating PUE, IT energy consumption should, at a minimum, be measured at the output of the uninterruptible power supply (UPS). However, the industry should progressively improve measurement capabilities over time so that measurement of IT energy consumption directly at the IT load (i.e. servers) becomes the common practice.
- For a dedicated data center, the total energy in the PUE equation will include all energy sources at the point of utility handoff to the data center owner or operator. For a data center in a mixed-use building, the total energy will be all energy required to operate the data center, similar to a dedicated data center, and should include cooling, lighting, and support infrastructure for the data center operations.

A task force has been created to further refine these metrics and to identify a roadmap for the future. The group also aspires to address IT productivity and carbon accounting in the future.

A little humor to help break up the day...

If it isn't broke ...

Normal people believe that if it isn't broke, don't fix it.
Engineers believe that if it isn't broke, it doesn't have enough features yet.



Job Postings & Help Wanted



This section of the newsletter is reserved for those firms wishing to advertise their desires to hire from the Chapters Membership.

If you are interested in utilizing this FREE service provided by the Rochester Chapter, please contact our Newsletter Editor, Christina Walter (585.486.2148) or by email cmwalter@trane.com

This service is available to any firm in our industry looking for knowledgeable persons in the HVAC&R industry.



ASHRAE Jobs is the Society's Online employment resource

With an exceptionally difficult recruitment market, the ASHRAE Jobs Career Center has been averaging 55 active job postings per month and just over 5,000 monthly job seeking visitors. Recruiters are experiencing, on average, 12 online applications per job posting and have access to just over 1200 resumes that have posted its launch on June 15.

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2009-2010 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 | 241 | 0 | 0 | 345 | 450 | 0 | 720 | 1515 |



Society News: Lighting the Path to Energy Efficiency: Changes Proposed for Standard 90.1

ATLANTA – From green roofs to glazing products, measures to increase energy stringencies are being proposed for major sections of Standard 90.1.

ANSI/ASHRAE/IESNA Standard 90.1-2007, *Energy Standard for Buildings Except Low-Rise Residential Buildings*, provides minimum requirements for the energy-efficient design of buildings except low-rise residential buildings. Currently, nine proposed addenda to the standard are open for public review.

Proposed addendum *by* would establish revised lighting power densities for both the whole building and space-by-space compliance methods. The addendum would reduce lighting power allowances in many building and space types while maintaining industry recommended lighting levels as their basis.

“This will encourage designers to use more efficient lighting technology applications that provide more light without using more energy, which will require more thought at the design phase,” said Eric Richman, chair of the 90.1 lighting subcommittee. “Additional proposed

daylighting control requirements will also encourage them to incorporate effective daylighting and corresponding electric lighting control into their designs.”

Changes also are being proposed to the envelope section, including addendum *f*, which sets requirements for high albedo roofs. This proposal recognizes a number of roof construction strategies that result in reduced buildings loads.

Other proposed changes to the envelope section are addenda *cl* and *cm*, both of which address glazing products. Addendum *cl* would clarify how to interpret the use of dynamic glazing products that are designed to vary a performance property vs. having just a single value. As the ratings for these products give a range of performance values, designers and code officials require an interpretation on what to use for compliance with the standard. Addendum *cm* clarifies how to interpret the use of dynamic glazing products given the requirements in proposed addendum *bb*, which would update building envelope requirements for opaque elements, such as walls and roofs and fenestration.

In the mechanical section of the standard, a

proposed addendum, *ck*, expands the zone control demand control ventilation to include system level strategies to reduce ventilation during system operation.

The remaining addenda – *cg*, *ch*, *ci* and *cj* – would make modeling defined by Section 11 and Appendix G of the standard consistent with other addenda that have modified Sections 6-9. These modifications include daylighting, dual minimum controls, cooling towers and data centers.

The proposed addenda to ASHRAE/IESNA Standard 90.1 are available for comment only during their public review period. To read the addenda or to comment, visit www.ashrae.org/publicreviews.

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.

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From the Editor's Desk

The ASHRAE Chapter Bulletin should reflect the opinions, activities and needs of it's members. We represent an active membership and the Bulletin can provide a valuable and enjoyable forum for news of our individual members.

Any announcements of interest, as well as letters, opinions, questions or comments, should be addressed to Christina Walter, Trane, 75 Town Centre Drive, Rochester, NY 14623 or email to cmwalter@trane.com

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Go to www.ashrae.org to update your personal information. Keeping your information current helps us to find you. Please add email, phone number, fax number, address correction, etc.

