December ASHRAE Meeting
Monday, December 8, 2008

Location: The Wishing Well Party House
1190 Chili Avenue, Rochester

Time: 5:30 PM Tech Session
6:00 PM Dinner
Main Program to follow

Cost: $25.00

Presenter: Patrick Whelan, Trane

Topic: “Applications and Updates to ASHRAE Standard 62.1,
Ventilation for Acceptable Indoor Air Quality”

Please RSVP by noon Friday, December 5th to Rob Wind, Phone: 585-341-3172 or
rwind@ibceng.com
Chapter Officers

**President**
Joseph Van Cura  
585-288-1600/288-2481 (fax)  
jvc@rpfedder.com

**President Elect**
Jeffrey Davis, PE  
585-381-3360/381-3368 (fax)  
jdavis@turnerengineeringpc.com

**Vice President/Tech**
Jim Browe  
585-697-0836/697-0839  
jbrowe@rfpeck.com

**Secretary**
Jeffrey Ellis  
585-334-7710/334-7738 (fax)  
ellis@airsystemsbalancing.com

**Treasurer**
Michelle Sommerman  
585-232-5135/232-4652 (fax)  
msommerman@bergmannpc.com

Board of Governors

Gavin Brownlie, Jr.  
585-325-1290/325-5543 (fax)  
gavin@crosbybrownlie.com

Edward J. Burns  
585-739-7548/872-9172 (fax)  
ejb@mechtechhvac.com

Robert Wind  
585-341-3172  
rwind@ibceng.com

Trisha Jackson  
585-272-4650/272-4676 (fax)  
jackson@nrg-concepts.com

Jeff Close  
585-289-6816/218-0737 (fax)  
Jeff.close@pres-services.com

Phil Masters  
585-288-1600/288-2481 (fax)  
philm@rpfedder.com

Committee Chairs

**CTTC/Programs**
Jeffrey Davis, PE  
585-381-3360/381-3368 (fax)  
jdavis@turnerengineeringpc.com

**CTTC/TEGA**
Carlos Dachary 585-671-8110  
cdachary@spc-ny.com

**CTTC/Refrigeration**
Michael Nohle 585-482-3876  
mikenohle@aol.com

**Historian**
Lee Loomis 585-262-2870/262-4156 (fax)  
leeloom@aol.com

**Membership**
Phil Masters 585-288-1600/288-2481 (fax)  
philm@rpfedder.com

**Research Promotion**
Jeff Close 585-289-6816/218-0737 (fax)  
Jeff.close@pres-services.com

**Student Activities**
Al Rodgers 585-218-0730/218-0737 (fax)  
arodgers@pathfinderengineers.com

**Newsletter Editor**
Christina Walter 585-486-2148/256-0067 (fax)  
cmwalter@trane.com

**Attendance & Reception**
Robert Wind 585-341-3172  
rwind@ibceng.com

**Webmaster**
Kevin Wind 585-263-1280  
kwind@rochester.rr.com
**ASHRAE 2008/2009 MEETING SCHEDULE**

<table>
<thead>
<tr>
<th>DATE</th>
<th>EVENT</th>
<th>LOCATION</th>
<th>SCHEDULE</th>
</tr>
</thead>
<tbody>
<tr>
<td>12/8/2008</td>
<td>Using the updated ASHRAE Standard 62.1 Patrick Whelan, Trane</td>
<td>Wishing Well House</td>
<td>5:30 PM Tech Session Dinner</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>7:00 PM Main Speaker</td>
</tr>
<tr>
<td>1/12/2009</td>
<td>Commissioning—Case studies, requirements for engineering specifications, Al Rodgers, Steve Beck. Tech Session—An introduction to Commissioning (What it IS and What it is NOT).</td>
<td>Mario’s</td>
<td>12:00-2:00 PM Lunch</td>
</tr>
<tr>
<td>2/6/2009</td>
<td>Valentine’s Dinner Dance</td>
<td>Hyatt Downtown</td>
<td>7:00 PM Reception</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>8:00 PM Dinner</td>
</tr>
<tr>
<td>2/9/2009</td>
<td>Using the updated ASHRAE Standard 90.1</td>
<td>Wishing Well House</td>
<td>5:30 PM Tech Session Dinner</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>7:00 PM Main Speaker</td>
</tr>
<tr>
<td>3/9/2009</td>
<td>Sustainable Design and the use of Standard 189 Thomas Lawrence, PhD, PE, LEED AP—ASHRAE DL Tech Session—Applications for custom air handlers</td>
<td>Mario’s</td>
<td>12:00-2:00 PM Lunch</td>
</tr>
<tr>
<td>4/13/2009</td>
<td>Refrigeration Tour—(tentative) High Falls Brewery</td>
<td>High Falls Brewery</td>
<td>5:30 Dinner</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>7:00 Tour</td>
</tr>
<tr>
<td>4/22/2009</td>
<td>ASHRAE Satellite Broadcast Indoor Air Quality</td>
<td>Bathtub Billy’s</td>
<td>11:30 Lunch</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>12:00-2:00 Broadcast</td>
</tr>
<tr>
<td>5/19/2009</td>
<td>Annual ASHRAE Golf Outing and Picnic</td>
<td>Ravenwood Golf Club</td>
<td>8:00 AM Golf</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2:00 PM Picnic</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>6:45 PM Dinner</td>
</tr>
</tbody>
</table>

**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: Joseph Van Cura

First of all I would like to thank those ASHRAE members who joined us at Mario’s for a lunch meeting featuring distinguished lecturer Gordon Holness.

We were fortunate in having Gordon address our chapter. As the Society’s President Elect, Gordon brings with him not only years of service to ASHRAE but also a world of knowledge and applications on energy conservation.

Gordon provided great insight into our global economy and pointed out how the energy usage of the emerging Third World countries makes it even more important to incorporate life cycle cost and sustainability into future designs.

He touched on the impact that designing to ASHRAE standard 90.7 and 189.1 would have on world energy consumption and reinforced the need for the world to get on board with promotion of designing to the ASHRAE standards as well as seeking LEED accreditation.

He spoke of new technology specifically solar and wind as ways to reduce dependence on non-renewable resources.

Feedback from the 50 plus attendee’s was very favorable to both Gordon’s presentation as well as the new Mario’s location.

December 8th 5:30 evening meeting will bring us back to the Wishing Well Party House and instruction on using the updated ASHRAE standard 62.1 as presented by Patrick Whelan of the Trane Company.

The board continues to seek individuals that would like to contribute to the operation of our chapter. If you have an interest, and would like to find out more about how you can assist, please feel free to contact me at jvc@rpfedder.com

It is a pleasure serving an organization that has contributed so much to both my professional and personal life.

Joseph Van Cura, 2008-2009 President
ASHRAE launches its newest certification program, **Operations and Performance Management Professional Certification**, which will recognize an individual’s understanding of how the management of HVAC&R operations helps to achieve and maintain building performance goals.

- Learn more at [www.ashrae.org/certification](http://www.ashrae.org/certification)

**Why Should You Attend?**

“Attending the ASHRAE meetings allows me to build networking relationships with the leaders in my industry that are writing codes and standards and conducting research that directly affects how I design buildings.”

Register online for the conference, tours and social events.

Register online until December 31. After this date, you can register for the conference in Chicago.

**Meeting Registration**

**Don’t Miss Out!**

Learn and earn technical program provides 140+ PDHs

ASHRAE is advancing the state-of-the-art in sustainability through the technical program with its theme **Sustainable Urban Design**, presenting the latest developments in sustainability as applied to systems and equipment, application of their use in different types of buildings and, especially, the impact on urban settings. Educational opportunities and some 60 PDHs are available through ASHRAE Learning Institute courses.

**Earn an ASHRAE Certification**

Stand out from the crowd

**AHR EXPO**

Learn about new products and the most innovative technology at the Expo, the world’s largest event for HVAC&R. More than 1,800 exhibitors from 30 countries are expected, with numbers growing.
**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.

### 2009 Course Offering (Rochester, NY): (This class is 3-days; Tuesday – Thursday)

1. **Jan 13-15** ‘Systems Fundamentals- I’ (HVAC Systems, Ice Storage, Heat Recovery, etc…)
2. **Feb 10-12** ‘Refrigeration Fundamentals’ (Refrig Basics, Refrig Piping, Refrig & Our Environment)
3. **Mar 10-12** ‘Energy Efficient Design Fundamentals’ (Chilled Wtr, DX, VAV, Dehumidification)
4. **Apr 14-16** ‘Product Fundamentals- I’ (a brief 1-2 hour summary of the top 12-15 products in HVAC)
5. **May 12-14** ‘Product Fundamentals- II’ (more in-depth look at AHU, WSHP, RTU, Compressor Technologies)

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: BeckerLearning@yahoo.com

### More Details for 3- day courses:

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

**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 after 5:15 p.m. on Thursday since our Henrietta, NY location is less than 10-minutes from the airport.
**Registration:** Please fill out this form for each person attending, and mail along with a **Check** or **Purchase Order** (made out to ‘Becker Learning’) to:

**Becker Learning / 5980 Sheppard Road / Dansville, NY 14437**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>(check all that apply)</td>
<td>5. [ ] Product-II</td>
<td>6. [ ] Airside-I</td>
<td>7. [ ] Airside-II</td>
<td></td>
</tr>
</tbody>
</table>

**Name:** __________________________________________  **Title:** __________________________________________

**Company:** __________________________________________________________________________

**Address:** __________________________________________________________________________

**Phone:** ( )  **Email:** __________________________

<table>
<thead>
<tr>
<th># of Courses</th>
<th>$/course</th>
<th>Total Cost $</th>
<th>Check # or PO #</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$1,000</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Authorizing Person**

<table>
<thead>
<tr>
<th>Printed Name</th>
<th>Signature</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

***If a PO is given, full payment must be received prior to the first day of class.***

**Cancellation Policy:**
- If someone cancels 60-days prior to the start of the class => no cancellation charge.
- If someone cancels 30-60 days prior to the start of class => 50% cancellation charge
- If someone cancels less than 2-weeks before the start of class, or simply doesn’t show up => charged the full amount

**Teaching Methodology:**
Similar to the way Joe taught nine classes in the Graduate Training Program of The Trane Company, students will learn a concept and then immediately apply this new knowledge with an application problem. Quiz/testing will also be used to measure the overall effectiveness of the teaching. In this way, the program receives continual improvement through direct feedback.

**About the Instructor:**
Joe Becker is a graduate of the University of Wisconsin-Madison with degrees in Naval Science and Industrial Engineering (1979). He is also a Graduate from the U.S. Naval Nuclear Power School at Mare Island, California (1975). Joe is a registered Professional Engineer.

After nine years in the Navy, Joe resigned his Commission in the Civil Engineer Corps. Since graduating from GTP’s class of 83-II, he worked as a Systems Engineer in C.D.S., Marketing Engineer in the Variable Air Volume Product Group, Manager of Technical Training in GTP, Sales Engineer, Sales Manager in Rochester/Syracuse & ISL for NE Territory.

Joe currently works part-time for Trane’s NE Territory and provides technical training through Becker Learning.
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, 11/14/08

- **DOE Solar Codes Board Releases Three New Reports**
- **Report Illustrates Challenges of Meeting Energy Targets for Federal Buildings**
- **Missouri Voters Approve a Renewable Energy Requirement**
- **Boulder Voters Follow Berkeley with Clean Energy Financing**
- **California Approves $1 Billion for Low-Income Energy Efficiency**

**DOE Solar Codes Board Releases Three New Reports**

The Solar America Board for Codes and Standards (Solar ABCs), funded by the U.S. Department of Energy (DOE), has released three new reports of importance to the solar industry on the topics of interconnection and net metering, solar access laws, and utility external disconnect switches.

The first report, *A Comprehensive Review of Solar Access Law in the United States*, documents legal issues for solar access and solar rights and recommends language for model statutes that can be used by state and local governments to protect access to solar resources for new and existing buildings.

The second report, *Comparison of the Four Leading Small Generator Interconnection Procedures*, reviews and compares four sets of interconnection procedures that regulators commonly consider when developing their own state and local procedures. Effective interconnection procedures will encourage solar projects.

The third report, *Utility External Disconnect Switch: Practical, Legal, & Technical Reasons to Eliminate the Requirement*, documents the safe operation of photovoltaic (PV) systems without a utility external disconnect switch (UEDS) in several large jurisdictions. It explains the rationale for eliminating UEDS. Among the reasons presented are: its functionality is redundant, it fails to provide expected protections, and it adds unnecessary cost to a PV system.

Solar ABCs is a collaborative effort among experts to formally gather and prioritize input from the broad spectrum of solar photovoltaic stakeholders including policy makers, manufacturers, installers, and consumers resulting in coordinated recommendations to codes and standards making bodies for existing and new solar technologies. The U.S. Department of Energy funds Solar ABCs as part of its commitment to facilitate widespread adoption of safe, reliable, and cost-effective solar technologies.

For more information, visit [http://www.solarabcs.org/](http://www.solarabcs.org/).

**Report Illustrates Challenges of Meeting Energy Targets for Federal Buildings**

Federal agencies may have to make significant process changes to meet the mandated 30 percent energy reduction in federal building by 2015, according to a new report. Produced by attendees of a workshop held by representatives of the Federal Facilities Council and private-sector organizations, the report details the challenges of meeting the requirements of the Energy Independence and Security Act (EISA).

One of the main changes recommended by attendees is alteration of funding mechanisms by Congress. Appropriators and oversight committees need to recognize that previous funding patterns may need to change, as additional upfront funds may be needed to implement energy savings, but long-term costs will fall with lower energy expenditures.

(continued on page 9)
One suggested strategy for funding improvement is establishing a government-wide revolving fund for energy improvements and energy efficient equipment purchases, to be funded in part by the energy savings agencies would realize from long-term improved energy efficiency efforts. The report also mentions the hope that agencies be given greater flexibility in managing their portfolios by selling unneeded assets and retaining funds to improve existing buildings.

Technical feasibility is also a major consideration in meeting EISA’s requirements. An integrated design process for both construction and renovations is essential; bringing together appropriators, procurement officers, design and construction teams, facility managers, project managers, training teams, and building occupants from the first phases of a project can encourage the kinds of collaboration necessary to making energy-saving decisions.

Other key areas of interest include:

- Education and training. These areas must be addressed, with opportunities for all agency employees with a focus on their particular roles within the organization—whether as building occupants, facilities management personnel, or procurement officers. Also, as new technologies are implemented, training—particularly of operations and maintenance staff—is necessary to assure these technologies operate at their ideal state to achieve energy savings.
- Case study development to assist agencies and the private sector in developing best practices and learning from previous projects. Effective case studies of energy-efficient buildings will rely on measurement and verification of energy use and other data.

ASHRAE plans to hold a legislative briefing in February to discuss federal agencies’ progress in meeting the requirements and the needs identified in the report. For a copy of the report see http://www.ashrae.org/docLib/20081103_FedBldgReport.pdf.

Missouri Voters Approve a Renewable Energy Requirement

Missouri voters have approved a measure that will require the state's investor-owned utilities to draw on renewable energy for 15% of their electricity supply by 2021. The Missouri Clean Energy Initiative, or Proposition C, passed easily, garnering approval from 66% of the state's voters and passing in every county but one. The statutory ballot measure defines renewable energy as wind power, solar thermal power, solar photovoltaic power, small hydropower, a variety of biomass energy sources, and fuel cells powered by hydrogen from renewable energy sources, but it also allows the Missouri Department of Natural Resources to designate new renewable energy sources. The measure requires at least 2% of the requirement to be met with solar energy, and it requires the utilities to offer their retail customers rebates of $2 per watt for customer-owned solar power systems, up to a limit of $50,000.

The ballot measure also allows utilities to buy their renewable power from out of state and to meet up to 100% of the requirement through the purchase of renewable energy credits (RECs), which can be bought from renewable energy facilities throughout the country. However, utilities cannot meet the requirements through the voluntary purchase of renewable energy by their customers, an approach known as "green pricing." Utilities that fall short of the requirement have to pay twice the going rate of the RECs needed for compliance, and the state will use that money to buy RECs and to support renewable energy and energy efficiency requirements. And to limit the impact of the measure on consumers, the cost impact of complying with the renewable energy requirement is capped at a 1% cost increase. The renewable requirement starts at 2% of sales in 2011 and gradually ratchets up to the 15% requirement by 2021. See the Missouri Clean Energy Initiative Web site (http://www.missouricleanenergy.org/).

Boulder Voters Follow Berkeley with Clean Energy Financing

Voters in Boulder County, Colorado, have approved a ballot issue for the county to provide financing for energy efficiency and renewable energy improvements to residential and commercial properties, an approach also recently adopted by Berkeley, California. Boulder County Ballot Issue 1A passed easily, with unofficial results showing 63.63% of voters approving the measure. The voter approval allows Boulder County to issue up to $40 million in special assessment bonds to finance the clean energy improvements. Homeowners and businesses that elect to participate in the program will repay the county over a number of years through special assessments that are added to their property taxes. Because the measure has just passed, many details of the program remain to be worked out, but the county hopes to begin accepting applications as early as February 2009. See the county's overview of the measure (http://www.bouldercounty.org/bocc/Ballot_Issues/2008/1A.htm).
The Boulder County measure follows a nearly identical financing effort now being launched as a pilot program by the City of Berkeley, California. In September, the Berkeley City Council approved an ordinance that allows the city to issue up to $80 million in bonds to finance energy efficiency and renewable energy projects. Called the Berkeley FIRST program (short for "Financing Initiative for Renewable and Solar Technology"), it is initially being launched as a program to finance solar photovoltaic electric systems on residential or commercial properties, with a cost cap of $37,500 per installation. Property owners will repay the city over 20 years through a special tax on their property, paying interest at a rate similar to a mortgage. As in Boulder, the tax will stay with the property, even if it is transferred or sold. Read an overview of the program from the city's Office of Energy and Sustainable Development (http://www.ci.berkeley.ca.us/ContentDisplay.aspx?id=26580).

California Approves $1 Billion for Low-Income Energy Efficiency

The California Public Utilities Commission (CPUC) has approved a budget of $1 billion over the next three years for the state's Low Income Energy Efficiency program. The program provides energy efficient appliances and weatherization measures at no cost to California households with low incomes. Stressing that the program must reach much higher numbers of households than in the past, the CPUC calls for all eligible customers to be given an opportunity to participate in the program by 2020, and it also calls for the program to evolve toward energy efficiency strategies that have longer-term payback times. The ruling also allows certain measures that improve health, comfort, and safety, even if the cost effectiveness of those measures is low. The program is administered by the state's four large investor-owned utilities: Pacific Gas and Electric Company, San Diego Gas & Electric Company, Southern California Edison Company, and Southern California Gas Company.

The California Public Utilities Commission (CPUC) has approved a budget of $1 billion over the next three years for the state's Low Income Energy Efficiency program. The program provides energy efficient appliances and weatherization measures at no cost to California households with low incomes. Stressing that the program must reach much higher numbers of households than in the past, the CPUC calls for all eligible customers to be given an opportunity to participate in the program by 2020, and it also calls for the program to evolve toward energy efficiency strategies that have longer-term payback times. The ruling also allows certain measures that improve health, comfort, and safety, even if the cost effectiveness of those measures is low. The program is administered by the state's four large investor-owned utilities: Pacific Gas and Electric Company, San Diego Gas & Electric Company, Southern California Edison Company, and Southern California Gas Company.

Governmental Affairs Update (continued)
Don’t miss out on the opportunity to promote your company’s products and services in the 2009 ASHRAE Buyer’s Guide.

This valuable guidebook is distributed to each Rochester Chapter ASHRAE member and is one of the best resources of HVAC product and service listings in this region.

You can make your ASHRAE Buyer’s Guide submission by emailing a black & white 4 ½” x 6” or 8 ½” x 11” page as you would like your ad to appear (or mailing a hard copy).

Ad Format options for submission include: pdf print (not a scan) or word document

The cost will remain the same as last year at $125.00. It is our intent to release the Buyer’s Guide by February 2009 so the deadline to receive your payment and ad is January 9, 2009.

Email your ad to: cwengineering@rpa.net or mail hard copy to the address below.

Please send your $125.00 check payable to ASHRAE Rochester Chapter to:

Charles White
128 Hogan Road
Fairport, NY 14450

If you have any questions, please call me at (585) 223-2462.

Thank you for your support.
Charles White,
Chairman, ASHRAE Rochester Buyer’s Guide Committee.
From the Editor’s Desk

The ASHRAE Chapter Bulletin should reflect the opinions, activities and needs of its 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

Disclaimer

"ASHRAE has compiled this publication with care, but ASHRAE has not investigated, and ASHRAE expressly disclaims any duty to investigate any product, service, procedure, design or the like which may be described herein.

The appearance of any technical data, editorial material, or advertisement in this publication does not constitute endorsement, warranty, or guaranty by ASHRAE of any product, service, procedure, design or the like. ASHRAE does not necessarily agree with any statement or opinion in this publication. The entire risk of the use of any information in this publication is assumed by the user. Statements made in this publication are not expressions of the Society or of the Chapter and may not be reproduced without special permission."