

FOG DISPENSER

Golden Gate Chapter



ASHRAE

VOLUME XLVII - NUMBER 5

February 2009

February Meeting Details

Date: Thursday, February 5, 2009

Place: PG&E Pacific Energy Center, San Francisco ([map & directions](#))

Schedule:

- 5:30 pm Registration and social hour
- 6:30 pm Dinner with announcements and introductions
- 7:45 pm Break
- 8:00 pm Speaker presentation
- 9:00 pm Adjourn

Cost:

	Before 5pm, Mon. 2/2	After 5pm, Mon. 2/2
Golden Gate Members	\$40	n/a
Non-members	\$47	n/a
Students	Free, but please register	n/a
Voucher holder	\$0, but please register	n/a

Please make your reservation at <http://www.ggashrae.org/meetings/2008-2009/feb.htm>

NOTE: If you make a reservation and cannot attend, you need to cancel in advance, or you will be billed. Tom Weaver will be taking reservations. If you need to CANCEL, please send a message to Tom at cancellation@ggashrae.org.

Using CO2-Sensors for Demand-Controlled Ventilation



Speaker: Steve Taylor, Taylor Engineering

Taylor is the principal of Taylor Engineering, Alameda, CA. He is a registered mechanical engineer specializing in HVAC system design, control system design, indoor air quality engineering, computerized building energy analysis, and HVAC system commissioning. Mr. Taylor graduated from Stanford University with a BS in Physics and a MS in Mechanical Engineering and has over 30 years of commercial HVAC system design and construction experience. He was the primary author of the HVAC sections of ASHRAE Standard 90.1-1989 and 1999 Energy Standard and California's Title 24 Energy Standards and Ventilation Standards. Other ASHRAE project and technical committees Mr. Taylor has participated in include Standard 62.1 Indoor Air Quality (chair), ASHRAE Standard 55 Thermal Comfort (member), Guideline 13 Specifying DDC (chair), Guideline 16 Economizer Dampers (chair), TC 1.4 Controls (chair), and TC 4.3 Ventilation (vice-chair).

Presentation Summary:

Steve Taylor will discuss how to correlate CO2 concentration to ventilation rates using Standard 62.1 and Title 24 Ventilation Standards, how CO2 sensors work and the results of recent tests on actual sensor performance, how to use CO2 DCV for single zone systems, and how to use CO2 DCV for VAV systems.

Golden Gate Chapter President's Message, February 2009



As we kick off 2009, it looks like we will be in for a rocky ride this year. Bad news follows more bad news on the economy. Even “successful” companies are announcing layoffs as California’s unemployment rate hit 9.3% in December, with worse to come – maybe 12% or more. Everyone seems to be counting on the new administration’s plan’s to stimulate the economy. The outgoing political party has done a great job of getting us to this point, yet seem unabashed about criticizing these plans and maybe even opposing them. Here in California, partisan politics has us in gridlock with the state budget, as one side won’t accept any increased revenue (taxes) and the other won’t accept all revenue reduction (cuts). Is our political system doing what we want? Perhaps we should try to change the system.

An Obama aide recently said the administration would seek to add 20 gigawatts (GW) or more of wind power and 4 GW of geothermal and solar power in the next three years, doubling the nation’s current renewable power base of 24 GW through loan guarantees and, eventually, national renewable energy requirements. Maybe we are finally moving in the right direction, but what can we do individually?

We can help owners make informed decisions on renewables by presenting facts on first costs and operating savings. We can also be creative and think “outside the box”, like Josh Plaisted. For those of you who did not attend our November meeting, water-cooling PV panels increases the electrical efficiency of the panels significantly, whilst providing hot water from a dual-duty panel. This is referred to as PV(T) or PVT. Take a look at the following study: http://www.esru.strath.ac.uk/Documents/MSc_2001/efstratios_chaniotakis.pdf Hopefully this kind of technology will get the investment it needs to become more widely used in our built environment. Perhaps you have an innovative idea about energy efficiency or renewable energy that will contribute to helping our planet? Don’t be shy now!

Our next meeting is on **Thursday, February 5, 2008 (5:30 pm to 9:00 pm) at the PG&E Pacific Energy Center**. Steve Taylor will make a presentation on “Using CO2-Sensors for Demand-Controlled Ventilation”. I look forward to seeing you all there.

Best Regards,

Jeff Blaevoet, Chapter President.

ASHRAE History – “Heating System” – The U.S. Tariff Building

Tom Gilbertson, Chapter Historian

Today, being Inauguration Day it seems appropriate to consider some history from Washington D.C. (If you have a chance, you might find it very interesting to work on historic buildings.)

In 1997 the Government Services Administration (GSA) began to consider the use of historic U. S. Government properties for “re-use” by parties other than the U. S. Government, itself. Accordingly, and after an exhaustive series of studies the U. S. Government agreed to a long term (60-years) lease of the U. S. Tariff Building that is located in Washington D.C.; then with oversight by the National Park Service, the government agreed to the private re-model of this historic building into a hotel.

The U. S. Tariff Building, (also sometimes known as the General Post Office)...the sixth-oldest building that the United States owns...located across the street from Smithsonian’s Portrait Gallery on 9th and E Street NW in Washington D.C. was made available, and we embarked on intensive, carefully-watched, and carefully-supervised, historic remodel of the building as it was made into a hotel.

Some facts about the building....

- Construction started in 1836, of this nominal 80,000 sq ft building
- Construction by the U. S. Army Corps of Engineers completed 1842
- Solid marble exterior....a “fire-proof” building
- Two parts to building – one part with masonry arches 5 ½ feet thick
- First part - Architect, Robert Mills, same as for the Washington Monument
- Second part - Architect, Thomas Walter, same as for the Capitol Building
- Four stories – 1st floor now 50% below grade, as streets were later, raised
- Montgomery Meigs, US Army Corps of Engineers was officer in charge of design, and construction
- Original building design had central heating, ostensibly designed by Meigs
- I found copies of some of Meigs’ original mechanical drawings
- Montgomery Meigs became the Quartermaster General during the Civil War
- General Meigs is the one who turned Robert. E. Lee’s farm into Arlington Cemetery (Meigs was a classmate of Lee at West Point, and both were from Georgia)...By way of explanation Lee, was held in contempt, as a traitor, by fellow Army officers; hence the destruction of Lee’s home place as a “farm”.
- Building housed the 1st public telegraph station for the U.S. Government
- The Pony Express was conceived in this building
- Samuel F. B. Morse installed the telegraph station
- Building housed the 1st automatic mail sorting equipment in the 1890’s
- Building was the 1st to have gas lights in Washington D.C.
- General Pershing “ran” World War I from 6,000 sq ft of office on the 3rd Floor
- Building was essentially 80% unused since 1897

The National Park Service would only allow minimal, and in some cases no work what-so-ever, to the existing walls. The “ASHRAE-inspired” design used the vertical-mono-flow-pumped water circuits, and avoided 280 cores through existing masonry arches, over half of them would have been 5 ½ feet long.

Kimpton Hotels operates this as the 182-room Hotel Monaco, and when you take your next trip to Washington D.C. you might consider a “tour” of this historic building that ASHRAE based-technology was used, as it helped to “rescue” this historic building.

Next month we can look into ASHRAE’s patron saint....(ASHRAE really has one)...he is “Ben Franklin”.....how’s that for some historic ASHRAE insight?

Student Activities

Gina Kalil, Student Activities Chair

ASHRAE Members!!

The students need you and have requested at least an hour of your time!! I hope you will take this opportunity to reach out. Please contact me if you are willing to dedicate an hour to mentoring a student, taking them around a jobsite, showing them what you do in your daily work, or just speaking with them over the phone. If you want to get more involved come talk to me at the next meeting or email me and I can give you some details.

Travel Grants!!!

Congratulations to Brian Coffey, a UC Berkeley student. He was chosen to attend the ASHRAE winter meeting in Chicago and will be sharing his experience at our February meeting!

Students - If you are interested (or know a student who is interested) in attending the ASHRAE summer meeting in Louisville, Kentucky – please look into applying for the summer meeting travel grants!

Scholarships and Science Fair!!!

The deadline for submitting for scholarships is March 25th!

The science fair date this year is March 16-20th and we will be recognizing students whose projects relate to our industry! Go see this fair if you can – it is great!

We will recognize the scholarship winners and science fair winners at our May meeting so plan to be there! Our regional student activities director will also be here – so meet her if you are interested!

High School Outreach

We have been able to get ASHRAE involved with ACE – a mentor program for students in high school. If you are interested in being a mentor part time please let us know as we will be looking for ASHRAE and industry volunteers to help make this program a success. If you think this is something your company would like to participate in, please contact me and I can see what we can do.

Any questions please contact Gina Kalil at gina.kalil@jci.com.

Thank you!!

Marble Draw

Annie Foster

Thanks to Norman S. Wright and Engineered Environmental Systems, Inc. for sponsoring January's Marble Draw. Nobody won the pot, which will be at \$500 for February's meeting. The odds are 1 in 8, so be ready to buy your raffle tickets!

We are always in need of raffle sponsors. If you would like to donate a prize for a future meeting, please contact Annie Foster at 415-402-2248 or annie.foster@wspfk.com.

Chapter Technology Transfer Committee (CTTC)

Tyler Bradshaw, ASHRAE Golden Gate CTT Committee Chair

2008/2009 Technology Awards

There is only one month left to submit your application for the 2009 competition so now is the time to start your application. If you are considering submitting one or more of your projects, start by reading the requirements, downloading the required forms and getting the owner's/client's permission. If you have questions on the application process, please email me at the address below.

The Technology Transfer Committee would like to encourage all members to consider participating in the Technology Awards this year. **Entries must be submitted by February 28th 2009.**

There are three stages of competition and awards: Chapter, Region and Society. The first step in this process is to submit your project to the chapter level competition.

First place winners from the Chapter competition move onto the Region X Award Competition. Then the Regional first place winners are eligible to move onto the Society competition.

Every year ASHRAE conducts the Technology Awards program to:

- Recognize ASHRAE members who design and/or conceive innovative technological concepts that are proven through actual operating data;
- Communicate innovative systems designs to other ASHRAE members;
- Highlight technological achievements of ASHRAE to others, including associated professionals and societies worldwide, as well as building and facility owners.

Each year Society presents awards in some of the thirteen categories: Commercial Buildings (New and Existing); Institutional Buildings (New and Existing); Health Care Facilities (New and Existing); Industrial Facilities or Processes (New and Existing); Public Assembly Facilities (New and Existing); Residential Buildings (New and Existing) both single family and multifamily (Low & High Rise); Alternative or Renewable Energy Use.

For each category a first, second, and honorable mention winner may be named. Also, one of the category first place winners may be selected to receive the ASHRAE Award of Engineering Excellence. The recipient will have demonstrated the best overall compliance with the judging criteria.

Society's bar is set pretty high for the awards as indicated in the very short list of awards from the last few years.

The submitted project should be completed and occupied for one year by the due date for the Society award application - September 2009. Therefore, your project should have been occupied by September 2008. By that time there should be good measurement and verification data available. The one year of occupancy is not a requirement for the Chapter award but it is a strong suggestion. This is a requirement for the Society award competition.

Please see our CTTC website or the following links for more info.

<http://www.ashrae.org/publications/detail/14703>

<http://www.ashrae.org/publications/detail/14704>

<http://www.ashrae.org/publications/detail/14692>

<http://xp20.ashrae.org/STANDCOM/ShortForm.pdf>

Join the CTTC Committee

If you like to assist the chapter and get involved with ASHRAE, the Chapter Technology Transfer Committee is one of the best places and we could use your help. We currently are looking to fill our Refrigeration Committee Chair position. We also have many CTTC improvement tasks that we could use help with and many requiring just a small time commitment for your participation. Talk to a board member or contact Tyler Bradshaw at tbradshaw@rumseyengineers.com to find out how you can help our chapter provide greater service to all of its members.

2008 - 2009 Events Calendar

<i>Date</i>	<i>Venue</i>	<i>Presentation Topic</i>	<i>Speaker(s)</i>
Thursday, February 5, 2009 Dinner	PG&E Pacific Energy Center, San Francisco	CO2 Based Demand Controlled Ventilation	Steve Taylor, Taylor Engineering
Thursday, March 5, 2009 Joint Meeting with Redwood Empire Dinner	Embassy Suites, San Rafael	Airside / Evaporative Energy Saving Systems	Keith Dunnivant Des Champs
Thursday, April 2, 2009 Dinner	Scott's Seafood, Oakland	TBD / Tour	TBD / Tour
Thursday, May 7, 2009 Dinner	PG&E Pacific Energy Center, San Francisco	Showcase/Tech Awards/Student Science Fair	Showcase/Tech Awards/Student Science Fair
Thursday, Jun 4 2009 Dinner	Scott's Seafood, Oakland	TBD	TBD

TBD = To Be Determined

Visit www.ggashrae.org/calendr.htm for updates, presentation summaries, speaker biographies and to register for the meetings. If you have suggestions for meeting topics, please contact Jeff Blaevoet at jblaevoet@gb-eng.com.

Gate ASHRAE Chapter Meeting Minutes

Date: January 8, 2009

Location: Pacific Energy Center; San Francisco, CA

1. Meeting was called to order by President Jeff Blaevoet at 12:05PM.
2. Self Introductions were held.
3. Scott Wayland announced that the Technology Award applications are due the end of February, 2009.
4. Scott Wayland introduced the speaker, Drury B. Crawley; ASHRAE Distinguished Lecturer; Team Lead, Commercial Buildings; Office of Building Technologies; U S Department of Energy. His presentation was entitled: **Getting from AEDGs to Zero-Energy Buildings**
5. Norman S Wright Corp. and Engineered Environmental Systems sponsored the raffle/marble draw. There was not a winner. 8 marbles are left for next month's game.
6. Meeting adjourned at 1:35PM

Submitted by:
Gary Harbison
Secretary BofG
GG ASHRAE

Photos from the January Chapter Meeting



Left: Glenn
Friedman,
Kristin
DiMartini

Right: Svetlana
Zaburskaya,
Ray Alfini



Left: Jason
McNabb,
Caitlin
DelZotto,
Linda Lam

Right: Ken
Drewnowski



Left: Speaker –
Dru Crowley

Right: Hans
Kaufmann



Left: Mike
Ryder, Alain
Descoins

Right:
BackGround –
Jeff Blaevot,
Annie Foster



