

FOG DISPENSER

Golden Gate Chapter



ASHRAE

VOLUME XLVII - NUMBER 1

October 2008

October Meeting Details

Date: Thursday, Oct 2, 2008

Place: Scott's Seafood, Oakland ([directions](#))

Schedule:

5:30 pm Registration and social hour
6:00 pm Dinner with announcements
7:00 pm Speaker presentation
9:00 pm Adjourn

Cost:

	<u>Before noon</u> <u>Mon., 9/29</u>	<u>After noon</u> <u>Mon., 9/29</u>
<u>GG-</u> <u>ASHRAE</u> <u>members</u>	\$40	\$47
<u>Non-GG</u> <u>ASHRAE</u> <u>members</u>	\$47	\$50
<u>Students</u>	Free with registration	
<u>Voucher</u> <u>holder</u>	Free with registration	

Please make your reservation at www.ggashrae.org/meetings/2008-2009/oct.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.

Panel Discussion: *Maintain to Sustain - Delivering ASHRAE's Sustainability Promise*

We will have a distinguished panel, with local experts in engineering, commissioning and operations.

Panel will focus on the theme of this year's society president. An excerpt from his message follows*.

William A. Harrison, 2008-09 ASHRAE President

In 2006, the ASHRAE Board of Directors approved a strategic plan with four principal directions, and that plan has served us very well. The first direction was to lead the advancement of sustainable building design and operation. Last year, Presidential Member Kent Peterson asked our members to focus on innovative designs to provide elegant solutions for high-performance buildings. This year, I am asking our members to focus on the operation of high-performance buildings. The unfortunate truth is that many buildings with great designs fade from green to grey when building operators don't understand how to realize the full potential of the energy conserving systems they manage.

ASHRAE Presidential Member Terry Townsend promised the world that our Society would lead the advancement of sustainability and my theme, *Maintain to Sustain - Delivering ASHRAE's Sustainability Promise*, will challenge ASHRAE to produce the tools required to deliver on that promise after construction is complete and the contractor has left the site.

Continued on next page

...today, the time has passed when we can shake our head and walk away saying “this isn’t my problem.” Every day we observe installations and operating practices that are wasting our precious energy and water resources, draining power from the grid, increasing the emissions from our generating plants. Building operating practices that waste energy really are our problem, and they must be addressed....

“Retro-Commissioning” is a popular approach to improving operational strategies in existing buildings. Energy service companies rely on improved operational strategies to ensure the success of performance contracts. However, much of the knowledge developed in these two instances is held as proprietary technology. Reluctance to share proprietary information has inhibited the widespread application of operational strategy improvement.

The slow development of building energy performance rating systems has been an impediment. Another constraint is the slow development of advanced monitoring and exception reporting systems. Improved operations are always dependent on improving the knowledge of the building operators, and development of the basic information required for effective training has to be a high priority for ASHRAE....

An important issue that must be addressed is the ongoing life of the energy savings developed through a focused operational improvement program. Without a program to continually upgrade the capabilities of the people operating the building, performance will soon slide back toward the default value of a poorly operated property....

High-performance buildings require very specialized maintenance. The operating cost for HVAC systems is made up of several components. Energy cost is a large component. Repair and replacement cost can be large. Maintenance cost is significant and is different from others in one critical characteristic: it can be deferred. Unfortunately, when maintenance is deferred, all of the other costs increase. Owners need help from ASHRAE professionals as maintenance plans are designed and executed. It is our obligation to define maintenance procedures that will optimize the energy performance of the building. We must also advise the owner of the effect that improper maintenance will have on the total cost of owning and operating the building. It has long been acknowledged in business that you can’t manage what you can’t measure. Maintenance plans need to include energy budgets, and maintenance procedures need to include energy reporting....

Our business, the buildings business, is the largest user of primary energy in most countries with developed economies. Improving building operating procedures is a no-regrets strategy for saving 10 to 40 percent of the energy used in HVAC systems. The key to implementing improved building operation is education on the local level. ASHRAE is ideally suited to fill that need....

Why is it important that we attack this challenge with priority? This year, we will dump about 30 billion metric tons of CO₂ into our atmosphere. How much is that? There are roughly six and one half billion of us on the planet, so that is about 4.6 metric tons per person. How big is 30 billion metric tons? We know that globally, we produce a lot of oil. We have constructed a tremendous amount of infrastructure to move this oil with pumping stations, pipelines and supertankers. We only produce about 4 billion metric tons of oil annually, so we dump 7.5 times as much CO₂ into the atmosphere as we produce oil. The International Energy Agency estimates that emissions could climb to 42 billion metric tons per year by 2030....

How long are we going to continue to use our fragile and precious atmosphere like a landfill, dumping in 30 to 40 billion metric tons of CO₂ every year?

Wasting energy is our problem, and we can no longer afford to shake our head and walk away. Buildings account for 40 per-cent of primary energy use in developed countries. Much of that energy use can be avoided by improved operating strategies. For those of us who understand that simple truth, it is our *duty* to attack that wasted energy.

We must communicate with the owners and operators of the buildings we touch to build understanding of the sources, costs and consequences of energy being wasted in their buildings. Our future holds net-zero-energy buildings, but the vast majority of the buildings that will exist in 2030 exist today, and we must attack energy use in those buildings with the same focused attention we direct at designing the buildings of the future.

We know the answers. If the studies are accurate, we have a no-regrets method to reduce the HVAC energy use in buildings by 10 to 40 percent, solely by improving building operations. All we have to do is communicate and educate more effectively. It is our duty. We are pledged to deliver ASHRAE’s promise of sustainability, and to do that we must maintain to sustain, we must train to sustain, and we must influence the operation of our buildings to conserve energy.

I ask for your help and your commitment, and I am confident that working together, we can deliver on **ASHRAE’s Promise of Sustainability.**

*See William Harrison’s entire message at: <http://www.ashrae.org/aboutus/page/1870> and <http://www.ashrae.org/aboutus/page/30>

Golden Gate Chapter President's Message



As incoming Chapter President, I want to welcome you to the new 2008/2009 Golden Gate ASHRAE year! Our first Chapter meeting will be on **Thursday October 2nd, 2008 at Scott's Seafood in Oakland** – our program includes a round table discussion with local experts on Bill Harrison's Presidential theme of "**Maintain to Sustain**".

On a personal note, I am hopeful for a long, healthy and happy life, and that I can provide a good start in life for my three boys currently in 7th, 9th and 11th grades. Certainly there will be challenges ahead of them economically, socially and climatically, on a local and global scale. Economic and social issues tend to be cyclical or transient, but climate change may not be so predictable or reversible. I am hopeful our efforts to combat carbon emissions and global warming will be in time and sufficiently effective, but am concerned we won't know how urgent things are until it's too late. We need to do things dramatically differently *now*, and the pressure to design net zero energy buildings with a small carbon footprint is already upon

us.

The good thing about this from my perspective is that some of the resistance to changing entrenched ideas is going away. Owners, contractors and design professionals in the US are more open to doing things differently now than at any time I have seen in the last 20 years. Building users may be willing to re-examine the range of indoor conditions that are acceptable if we can give them some influence in controlling their environment. Maybe we can even move away from the fear of litigation in the interest of saving our planet! It will be interesting to see how the balance between innovation and professional liability plays out. Certainly there are potential pitfalls, and we will have to be even more diligent to ensure we deliver buildings that meet expectations for indoor air quality, comfort and maintainability as well as exceptional energy performance. Communication and commissioning will play important roles to this end.

This is a very exciting time for our industry as the significant challenges before us also represent tremendous opportunities. This is one reason I want to place more emphasis on student activities this year with the help of Gina Kalil, our new SA committee chair. Our Society President, Bill Harrison, has outlined his theme of "Maintain to Sustain" in the August 2008 edition of the ASHRAE Journal, which we are supporting as a chapter. I hope you feel equally galvanized by these issues and I would encourage you to get involved with your ASHRAE Chapter, by attending meetings and by becoming a committee member. You will see from our website that we are looking for chairs for the membership, codes and product show committees, but you can participate as a committee member in any of the listed areas with very little time commitment.

We are pleased to have two new board members this year in Tom Weaver and Isabelle Lavedrine and, for the first time in three years, we will have a full crew of seven with Scott, Gary, Kristin, Robert and myself. Thank you again Glenn for all your work over the last seven years. I look forward to seeing you all at our first meeting.

Best Regards,

Jeff Blaevoet

Student Activities

Gina Kalil, Student Activities Chair

Welcome back to another great year of fun activities for us to get involved in with our local student community! This year I hope to have some great events lined up that will allow high school through college students get involved with ASHRAE!

I would love to have some volunteers for my committee – if you are interested in ANY of the following please let me know. Some of them only require an hour of your time!

- Being a mentor for a student interested in our industry.
- Planning events for high school students and/or visiting the schools to talk with them about a future in engineering
- Quick presentations on your field of work or concentration to college and high school clubs and/or classes
- Idea person – give me some of your great ideas or help me getting them started!
- Sponsoring a student for one of our meetings

We will still participate in the Science Fair Competition and the Scholarship and Travel Grants. Dates to be announced soon.

I look forward to a great year and hope you considering getting involved. It only takes a little bit of time to change the outlook of a current student to be a lifetime ASHRAE contributor. I hope you take a chance this year and give your time.

Marble Draw

Annie Foster

Thanks to everyone who donated prizes last year for the marble draw. We raised over \$2050 for ASHRAE research! We appreciate your support.

The pot for the October meeting is \$500, and 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.

ASHRAE Research Report

Jeff Violet, Research Promotion Chair

Thank you to the firms and individuals who made ASHRAE Research contributions during last years campaign. A special thank you to contributors who gave on the honor level or above:

Corporate Golden Circle (\$10,000+)

Bay Area SMACNA

Corporate Honor Roll (\$250+)

ASHRAE Redwood Empire

Acutherm

Nazzaro and Associates

Gayner Engineers

Conservation Mechanical Systems

Taylor Engineering

Individual Honor Roll (\$100+)

Edgar DeGuzman

Richard Charles

James MacDonald

Scott Wayland

Gary Harbison

Jeff Violet

Dick Friedman

Jonathan Malkovich

Mark Hydeman

Wayne Wormer

Mark Walton

Edward Arens

Glenn Friedman

Jeff Blaevoet

Robert Marcial

Kristin DeMartini

Shlomo Rosenfeld

Kyle Blocker

Steve Taylor

Carl Jordan

Dennis Thompson

Wasil Popow

I look forward to support from the board and members in this year's effort to meet our contribution goal. I will be forming a research promotion team; anyone interested in joining me will be greatly appreciated.

Donations are tax deductible, by check, paypal or credit card.

To make contributions please contact Jeff Violet, jviolet@myeesi.com, 415-724-1214

Membership Promotion

Gary Harbison

Golden Gate chapter of ASHRAE is in need of a Membership Promotion Committee Chair. If you are interested in filling this position, please contact any member of the Board of Governors. Membership Promotion is vitally important to the long term success of Golden Gate chapter. Chair provides focus on recruitment of new and retention of existing members; identifying nominees for Distinguished Service or Exceptional Service Awards, monitoring upgrades in member status and assisting in the publication of the yearly membership roster.

Secondly, we are encouraging every Golden Gate ASHRAE member, to invite interested applicants to any dinner or lunch chapter meeting, to become members of the local and national Society. If you bring an applicant to any meeting, you and the new member will receive half-off your meal...buy 1, get 1 free!

To receive the complementary dinner, the candidate must bring a completed application; plus \$165. Society and \$50. Chapter membership fee is also required. Please bring cash or a single check (\$215. total) made payable to ASHRAE.

Chapter Technology Transfer Committee (CTTC)

Tyler Bradshaw, ASHRAE Golden Gate CTT Committee Chair

2008/2009 Technology Awards

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 28, 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. Talk to a board member or contact Tyler Bradshaw at tbradshaw@rumseyengineers.com.

Announcements

Pacific Energy Center Fall 2008 HVAC class schedule

The PG&E Pacific Energy Center has started its fall semester and offers the classes below in addition to other classes around California and over the Internet. The classes below are funded by the California public goods charge and are free to California ratepayers and business with energy efficiency projects in California. Registration is required. Visit www.pge.com/energyclasses for more details on these classes and for registration. Click on the class title below to register for that class.

Wed, Oct 8 9:00 am - 4:30 pm	State-of-the-Art Data Center Design and Control	San Francisco
Thu, Oct 16 6:30 pm - 8:00 pm	Mark Modera: The Western Cooling Efficiency Center	San Francisco
Fri, Oct 17 9:00 am - 4:30 pm	State-of-the-Art Data Center Design and Control	Oakland
Mon, Oct 20 9:00 am - 4:30 pm	Home Performance Contracting - Putting It All Together	San Jose
Wed, Oct 22 9:00 am - 4:30 pm	Optimizing the Design and Control of Chilled Water Plants	San Francisco
Tue, Oct 28 9:00 am - 12:00 pm	Low Energy HVAC Approaches and Their Implications for Architectural Design	San Francisco
Mon, Nov 3 9:00 am - 4:30 pm	Green Home Energy Upgrades: Level 3-Review and Testing	San Francisco
Wed, Nov 5 9:00 am - 4:30 pm	Sun's Chill Off: Field Test of Data Center Liquid Cooling Technologies	San Francisco
Wed, Nov 19 9:00 am - 12:00 pm	Low Energy HVAC Approaches and Their Implications for Architectural Design	San Jose
Wed, Nov 19 9:00 am - 4:30 pm	Innovative Applications of Evaporative Cooling	San Francisco

Bob Swezey & Gene Valerio Honorarium for GGCSF

Gary Harbison

The Golden Gate Chapter of ASHRAE is honored to receive a **\$5000. donation** from Sue Swezey, for the Golden Gate Chapter Scholarship Fund (GGCSF). Sue is donating these funds in the names of Bob Swezey and Gene Valerio, who during their careers were dedicated ASHRAE members, and supporters of the Golden Gate outreach to deserving students.

They were co-founders of Air Filter/Control in San Jose and were both very active in ASHRAE. Bob was more involved with the San Jose Chapter (a Past President) but also attended SF meetings occasionally, as well as CRCs and both Summer and Winter Conferences.

Gene was a Past President of the Golden Gate Chapter, was active at the National level, and never missed a Conference anywhere. Gene's infectious laugh was sorely missed at all chapter meetings, after he retired and moved to Coos Bay, Oregon.

Bob passed away in August 2007, and Gene is in ill health at the moment. However, I know that Gene will be glad to know that this contribution, in his and Bob's names, will help us provide needed scholarships to young scholars across Northern California.

LBNL asks for GG ASHRAE Assistance

William Fisk, ASHRAE Fellow; Lawrence Berkeley National Laboratory

Lawrence Berkeley Laboratory is seeking your help to gain access to California Buildings with carbon dioxide based demand controlled ventilation.

With support from the California Energy Commission, scientists at Lawrence Berkeley National Laboratory (LBNL) are about to launch a new research project on demand controlled ventilation. An initial task is to evaluate the accuracy of the carbon dioxide sensors, in actual use, within 25 California commercial buildings. A prior small pilot study found that many sensors were quite inaccurate; however, a much larger data set is needed.

LBNL is asking for your assistance to help them identify and gain access to buildings. The sensor accuracy testing normally requires about two hours with cooperation from the building facility management staff who will benefit from the information about the performance of the carbon dioxide sensors in their building. In a few instances, we will offer a free sensor replacement so we can evaluate why some sensors perform poorly.

Please contact David Faulkner [D.Faulkner@lbl.gov , 510 486 7326] , or Douglas Sullivan [DPSullivan@lbl.gov 510 486 6367] with contact information for potentially suitable study buildings.

Job Postings

ENERGY ENGINEER

Mid-Senior Level

kW Engineering Inc. is an independent provider of energy engineering services specializing in assessments of energy savings potential in commercial, industrial, and institutional facilities. We are seeking Engineers with 4 plus years of experience in energy efficiency for positions in our Oakland office. Come share in our commitment to a sustainable energy future!

We are looking for self-motivated individuals interested in technical engineering and project management responsibilities. Work with a highly experienced staff committed to saving energy in buildings and industrial processes. We offer flexible work hours, hands-on experience, and a creative, casual work environment. Competitive salary and benefits for qualified candidates. DOE-2, M&V, experience with utility incentive programs and/or a P.E. are pluses.

Please submit resume, cover letter and salary requirements to:

kW Engineering, Inc.

287 17th St. Suite 300

Oakland, CA 94612

Job Code: KWMSEASH

Email: hr@kw-engineering.com

or fax: 510-834-6421

Mechanical Engineer Wanted at Taylor Engineering

Job Description:

Design HVAC systems and controls, for commercial buildings using CAD tools. Perform load calculations and energy analysis. Analyze building mechanical system operation data, diagnose operation problems, and provide technical leadership. Provide whole building energy model and simulation. Make recommendations for improving system performance.

Job Requirements:

Bachelor's degree or equivalent in Mechanical Engineering or closely related field and two years experience performing HVAC systems analysis or whole building energy simulation and analysis, including HVAC.

Please send resume to

Quanita Savoy

Taylor Engineering

1080 Marina Village Parkway, Suite 501

Alameda, CA 94501.

Fax: 510-749-9136.

E-mail qsavoy@taylor-engineering.com

2008 - 2009 Event Calendar

<i>Date</i>	<i>Venue</i>	<i>Presentation Topic</i>	<i>Speaker(s)</i>
Thursday, October 2, 2008 Dinner	Scott's Seafood, Oakland	TBD	TBD
Thursday, November 6, 2008 Lunch	PG&E Pacific Energy Center, San Francisco	TBD	TBD
Thursday, December 4, 2008 Joint Meeting with San Jose ASHRAE Dinner	Genentech Campus- South San Francisco	TBD	TBD
Thursday, January 8, 2009 Lunch	PG&E Pacific Energy Center, San Francisco	TBD	TBD
Thursday, February 5, 2009 Dinner	PG&E Pacific Energy Center, San Francisco	TBD	TBD
Thursday, March 5, 2009 Joint Meeting with Redwood Empire Dinner	Embassy Suites, San Rafael	TBD	TBD
Thursday, April 2, 2009 Dinner	Scott's Seafood, Oakland	TBD	TBD
Thursday, May 7, 2009 Dinner	PG&E Pacific Energy Center, San Francisco	TBD	TBD
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 Scott Wayland at sewayland@comcast.net

Misc. 2007-2008 Photos



Left: Tunde Munz, Jeff Blaevoet

Right: Tracy Marcial, Robert Marcial, Edgar DeGuzman



Left: Duane Okimoto, Glenn Friedman

Right: Tom Weaver, Gary Harbison, Jeff Blaevoet, Mike Kiani, Gary Margadant, Dan Long, Prof. Steve Pronchik, CMA Student



Left: Becky Courter, Edgar Deguzman

Right: Bruce Wilcox, Carl Jordan

