

FOG DISPENSER

Golden Gate Chapter



ASHRAE

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DEC 2007

December Meeting Details

Date: Thursday, Dec 13, 2007

Place: Double Tree Hotel
835 Airport Blvd, Burlingame, CA 94010 ([directions](#))

Schedule:

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

Cost:

	<u>Before noon</u> <u>Fri., 12/7</u>	<u>After noon</u> <u>Fri., 12/7</u>
<u>ASHRAE</u> <u>members</u>	\$40	\$47
<u>Non-members</u>	\$47	\$50
<u>Students</u>	Free with registration	
<u>Voucher holder</u>	Free with registration	

Please make your reservation at
www.ggashrae.org/meetings/2007-2008/dec.htm

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

Innovation for a Sustainable Built Environment



Kent Peterson, ASHRAE Society President

Kent W. Peterson, P.E., Fellow ASHRAE, is vice president and chief engineer of P2S Engineering Inc., Long Beach, CA

As ASHRAE's president, Mr. Peterson directs the Society's Board of Directors and oversees the Executive Committee. Through his theme, *Greater Efficiency Today, Blue Skies Tomorrow*, Mr. Peterson emphasizes innovation in the quest for sustainability in the built environment. He notes that "energy efficiency should always be the elegant alternative to fuel consumption." As such, he encourages ASHRAE members and the industry to be more innovative in their thinking, more daring in their creativity, and more dedicated to their pursuit of best practices that will dramatically improve building energy performance.

Mr. Peterson will be discussing our role in helping to create a better, more sustainable world. Building energy consumption currently accounts for 40% of the United States primary energy consumption. The built environment has also been cited in the Intergovernmental Panel on Climate Change 4th Assessment Report as providing the greatest potential for reducing greenhouse gas emissions worldwide. What can you do about this? Come learn about ASHRAE's bold new

(continued on next page)

programs to help transform the building market towards net-zero energy buildings and learn how you and your company can become an expert in delivering high-performance buildings.

Mr. Peterson has served on the Board as president-elect, treasurer, vice president, and Region X director and regional chair. Past service includes chair of Technology Council, Members Council, the Advocacy Committee, the President-Elect Advisory Committee the ASHRAE Learning Institute Board of Trustees, the Finance Committee, the Planning Committee, the Region-at-Large Transition Committee and the Student Activities Committee. Mr. Peterson was president of the Orange Empire Chapter. He is a recipient of the Exceptional Service Award and the Distinguished Service Award. He holds a bachelor of science in mechanical engineering from California State University at Long Beach.

President's Message: Mechanical Engineering in 6 hours??

Robert Marcial, President

In my previous President's message, I wrote that a while back I decided to take the path of education, energy efficiency and good building design. One of the ways I've taken on those three tasks is through working with architecture students to convey fundamental about building science, about how buildings work, and the implications of design decisions upon occupant well-being and a building's energy use. As you might imagine, that's no small task.

I've taken on this task as a lecturer at UC Berkeley and now as an Adjunct Professor at the California College of the Arts where I co-teach the Building Energy Systems class. In that class I have about...get this...3 hours of lecture and 3 hours of lab time in which to teach students "all about mechanical systems." That's it! Even if I had a whole semester, it would be impossible. However, my job isn't to get my students to learn how to design mechanical systems, but rather to introduce them different types of mechanical systems; have them do a zoning, space allocation, and duct diagramming exercise; give them rules of thumb about space requirements for mechanical systems; and familiarize them with different parts of mechanical systems.

I also take it upon myself to convey that engineers, be they structural, mechanical, or electrical, aren't miracle workers that the architect's responsibility is to "meet them halfway" by designing for efficiency first; therein reducing the size of mechanical systems and space requirements. I always refer them to a quote by the late Louis Kahn. Those of you who have visited the Kimball Art Museum in Texas or the Salk Institute in Southern California have been fortunate enough to experience his finer pieces of work. Of mechanical systems, he wrote, "I do not like ducts; I do not like pipes. I hate them really thoroughly, but because I hate them so thoroughly, I feel they have to be given their place. If I just hated them and took no care, I think they would invade the building and completely destroy it." If you know him and his work, you'll know that he really didn't hate mechanical systems, but rather embraced them for the sake of integrated efficient design and for the sake of being a responsible part of the building industry. By knowing and understanding them, he (the designer) was able to hold on to his original design.

And that's similar to the approach that I take with my students. I convey that if they don't want their designs altered in a significant way, then they need to learn about building systems and consider them when designing. This might seem like an underhanded or backdoor way of getting to them, but I have to talk their language. Just as I aim to find a back door to getting my architecture students to consider mechanical systems, I think it's the responsibility of our mechanical engineering community to embrace something about architectural design to meet designers half way. Will this make everything peachy-keen and get both sides to work happily together? Probably not, but I'd like to think that it's a step in the right direction.

I bring this up because we have several students that come to our Chapter and Society meetings that are still in their malleable stages in their academic and professional lives. I'd like to see and hear more of our Chapter members sponsor them and engage with them to learn about their academic and professional interests. Many of the students that come to Chapter meetings are from architecture departments, so the next time you have the opportunity to talk with an architect or student of architecture ask him about his favorite building. Or better yet, tell him about yours as a way of opening up the dialog between disciplines. You may have the opportunity to do this at the [December 13 meeting with Kent Peterson](#) as our speaker. If not, there are other opportunities listed on our Chapter meetings page.

With warm holiday regards,

Robert Marcial

Chapter Technology Transfer Committee (CTTC)

Tyler Bradshaw, ASHRAE Golden Gate CTT Committee Chair

2008 Golden Gate Technology Awards

Now is the ideal time to start your application for the 2008 competition. 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.

The 2008 award applications will be due no later than Feb 2008. The following are links for more information on how to get started.

<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>

2008 Spring Seminar

Our 2007 seminar was a huge success; many thanks to this year's seminar committee for all their hard work. The CTTC is already planning to build upon this success with next year's seminar currently scheduled for May 1, 2008 at the PG&E Energy Center. Check back for announcement of specific topics, speakers and schedule as they are firmed up.

We are also looking for sponsors for the 2008 seminar. If you are interested in sponsoring as an individual or company, please contact Tyler Bradshaw at tbradshaw@rumseyengineers.com for additional details.

Proposed Changes to California Solar Initiative (CSI)

The CPUC has proposed changing the CSI Handbook to include qualification for qualify non-PV technologies, including electric displacing solar thermal (generally defined as solar water heating, solar heating and air conditioning) and electric generating solar thermal (generally defined as stirling, trough and concentrating solar technologies). Follow the links below for more information.

http://docs.cpuc.ca.gov/PUBLISHED/COMMENT_RESOLUTION/75456.htm

<http://www.pge.com/tariffs/advice/adviceletters/3060-E.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 could use your help. Talk to a board member or contact Tyler Bradshaw at tbradshaw@rumseyengineers.com.

ASHRAE History Touches GG Chapter

Tom Gilbertson – Historian GG ASHRAE

Did you know that “real” ASHRAE History has a trail that leads to, and through our Golden Gate Chapter?

Allow me to offer what I think is worth being aware of, from a historical point of view.

First, Willis Carrier (we all recognize that name) was considered to be one of the 100 Most Influential Persons in the History of the World; that was Life Magazine's opinion some years ago. Think about the significance of that selection! **The most important 100 people in the history of the World!**...and he really was the father of our industry.

But what about the Golden Gate Chapter?...well, Willis Carrier's son, Earl Carrier, was a regular member of our chapter, and attended the Golden Gate Chapter meetings...and irony of ironies...Earl sold York equipment in our area.

Earl was a very intelligent, capable engineer, and most people who met him seldom put him with the direct connection to the “Willis Carrier”. One night I happened to ask Earl, “By the way...are you any relation to Willis Carrier?”...and his reply of ... “Well, yes,...I am his son.” I was stunned.

Earl related to me that his father had sent him off to engineering school, and had chosen the University of Wisconsin for him to attend, and to study mechanical engineering; which he did, and he graduated with the degree in mechanical engineering. Willis was apparently a pretty strong personality...(make that an understatement)...and Earl was apparently pleased to satisfy his father's wishes.

So from time to time I would ask Earl about stories of his father...Along that line we all learned that Earl had married the girl next door from his home in Syracuse, New York...Earl's widow addressed our Golden Gate 100th Anniversary Meeting in 1994, and revealed that she knew Willis Carrier before Earl did! Mrs. Earl Carrier pointed out that Earl had been adopted by Carrier, and apparently came to live with the Willis Carrier family at about the age of 5 or 7, and the “little neighbor girl”, Earl's future wife, being about the same age as Earl actually knew Willis before Earl did!

One time I did ask Earl if the story of his father “discovering” psychometrics in the Pittsburgh, PA rail station was really true. Earl related that, “Yes” his father had waited in the railway station on the south bank of the Allegheny River, at Pittsburgh, and “Yes” during his wait Willis had observed the rail station's windows' began to “fog-over” as the cold north wind rather suddenly cooled the glass, causing the interior of the glass to reach the dew point of the moisture inside the rail station. (I'm not sure that the term “dew point” even existed at that time, so if you discover something you get to make your own words!)

Willis at the time, about 1904, was the chief engineer of the Buffalo Forge Company, and had reason to travel to the industrial areas, Pittsburgh, PA being extremely important, to provide engineering services so that fans could be applied to industrial needs.

For you trivia buffs, the Allegheny River, and the Monongahela River meet at Pittsburgh, PA to form the....”Ohio River”...and the railway station in the story is on the south side of the Allegheny, across from downtown Pittsburgh.

So, 12 years ago when I was doing a job in Pittsburgh, I happened to stay at the Sheraton Hotel next door to the “railway” station...now converted like so many rail stations into a restaurant....and when eating there, the weather changed, cooled off the glass, and the restaurant windows “fogged-over”. I am not suggesting that I was intuitive enough to recognize what Willis Carrier did, but the fact Willis Carrier did recognize the astounding significance and interrelationships of....“Condensation, heat transfer, mass transfer, fluid flow, working fluids, and thermodynamics” did make me stop eating for a minute.

The Carrier observations clearly led to the concepts of what we know as “air-conditioning”...and are the roots of our industry. Earl told me that his father was so intrigued by his observations in early 1900, that he missed the connecting train...a fact also related by Earl's widow some 90 years later, at our Golden Gate's 100th Anniversary Meeting.

Do you know when, and who, “invented” fin tube radiation?...and what company was built on that “discovery?”

Non-Commercial Ads

The California Investor Owned Utilities, Pacific Gas and Electric Company, Southern California Edison Company, San Diego Gas & Electric, and Southern California Gas Company, under the auspices of the California Public Utilities Commission, are requesting general, targeted, and innovative proposals for their 2009-2011 Energy Efficiency Program Portfolios from third parties to deliver energy efficiency programs in their respective service territories.

This solicitation process is designed to help uncover newer methods or program designs for capturing cost effective, reliable energy savings (kWh and therms) and associated peak demand reduction (kW) for both the short and long-term. Requests for proposals will be issued from November 9, 2007 through January 30, 2008.

Interested parties should register at www.pepma-ca.com <<http://www.pepma-ca.com>> to be added to the solicitation mailing list or contact Robyn Zander at (626) 633-3015.

Job Posting

Mechanical Designer/Engineer

Our growing San Francisco office is seeking a Mechanical Designer / Engineer, junior or intermediate, experienced in the design of building mechanical systems including HVAC and plumbing system design. The successful candidate will be required to produce construction plans, specifications and related reports and calculations. Sustainable design is a major focus of this practice and candidates must have an interest and a working knowledge of Green Design techniques for mechanical building systems. Must be a LEED Accredited Professional, and have 3-10 years of mechanical design experience including HVAC and plumbing systems.

For more information regarding this opportunity, please contact:

John Andary, PE, LEED AP
Managing Principal
john.andary@stantec.com
(415) 626-6814

Minutes of Golden Gate Chapter Meeting—November 1, 2007

Scott Wayland, Wayland Engineering Inc.

Meeting Date: Thursday, November 1st, 2007

Location: PG&E PEC SF, Upstairs Meeting Room

Minutes by Scott Wayland

- Registration, Lunch started at 11:30
- Robert Marcial, Chapter President, called the meeting to order at 12:15 p.m.
- Announcements and administrative discussion
 - Attending our Chapter Meeting was a very large group Cal Poly San Luis Obispo ASHRAE Members that came up in a Bus to attend, see the PEC and other Bay Area sites
 - Scott Wayland gave out the 5 plaques from the 2007 GG ASHRAE Tech Award competition.
 - Building Tour (Hillsdale Shopping Mall: Plant includes: two absorption chillers, a centrifugal chiller driven by steam turbine, another centrifugal chiller with a variable speed drive, ice thermal storage, field erected cooling tower and an msdos EMS system. MUST RSVP to Brian Maher, bmaher@schaufcompany.com, no later than Tuesday, 12/11, 5 P.M. due to limited availability
- Self introductions
- Jeff Blaevonet introduced the speaker for the main presentation: Mike Ericksen
- Main presentation: Geothermal
- Marble draw raffle by Cory Palmer and Kendra Tupper
- Next meeting: Thursday, December 13 @ 5:30 p.m. at the Double Tree Hotel, 835 Airport Blvd., Burlingame, CA
- Motion to adjourn the meeting at 1:00 pm.

2007 - 2008 Event Calendar

<i>Date</i>	<i>Venue</i>	<i>Presentation Topic</i>	<i>Speaker(s)</i>
Thursday December 13, 2007 Lunch	Doubletree	Innovation for a Sustainable Built Environment	Kent Peterson
Thursday January 10, 2008 Dinner	Scott's Seafood, Oakland	Natural Ventilation	Gail Brager, U.C. Berkeley
Thursday February 7, 2008 Dinner	Pacific Energy Center, S.F	Radiant Cooling	Timothy Moore, Center for the Built Environment
Thursday March 6, 2008 Dinner	Embassy Suites, San Rafael	TBD	TBD
Thursday April 3, 2008 Dinner	Pacific Energy Center, S.F.	TBD	TBD
May 1 2008 virtual building tour Dinner	Scott's Seafood, Oakland	TBD	TBD
Thursday Jun 5, 2008 Dinner	Carnelian Room, S.F.	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.

Photos from the November 2007 GG ASHRAE Meeting



(left) Scott Wayland presents Jeff Blaevoet with an ASHRAE technology award



(right) Tyler Bradshaw gets his marble draw rewards for his committee efforts



(left) Robert Marcial in Presidential form



(right) Mike Ericksen discusses geothermal systems



(left) A GGASHRAE Board member (Gary Harbison) gets marble draw rewards.



(right) Some of the 70 plus November attendees.