FOG DISPENSER

Golden Gate Chapter ASHRAE

VOLUME XLV - NUMBER 7 APR 2007

April Meeting Details

This dinner meeting is our annual Vendor Product Show and Awards Night on the ***first*** Thursday of the month.

Date: Thursday, April 5, 2007

Place: Pacific Energy Center, San Francisco
851 Howard Street between 4th and 5th Streets
Directions:
http://www.pge.com/pec/admin/directions.shtml

Schedule:
4:30 – 6:30 PM: Product Show
5:00 PM: Registration begins and bar opens.
6:30 PM: Dinner, announcements & introductions
7:30 PM: Break
7:45 PM: Main program
8:45 PM: Adjourn

Cost:

	Before noon Fri., Mar 30	After noon Fri., Mar 30
ASHRAE members	$40	$47
Non-members	$47	$50
Students	Free with registration	
Voucher holder	Free with registration	

Please make your reservation via our Web site. Visit the Event Calendar at www.ggashrae.org/calendr.htm, click April 5, and fill out and submit the form. Purchase your voucher at the meeting or online using your credit card and PayPal after you submit the form. The season voucher is $320 for members; that's 9 meetings for the price of 8. The voucher is transferable among co-workers and may be used for student sponsorship.

Remember – if you make a reservation and cannot attend, you need to cancel in advance, or you will be billed. Scott Wayland will be taking reservations. If you need to CANCEL, please send a message to Scott at cancellation@ggashrae.org.

April Program

Vendor Product Show and Awards Night

Left: Lively participation at last year's product show.
Right: Award winning student design!

This month's meeting features Golden Gate ASHRAE's annual Vendor Product Show as well as Awards Night. The awards to be recognized include both ASHRAE Awards and Student Awards for the junior high and high school students who won Golden Gate ASHRAE Science Fair Awards at the recent Bay Area/San Francisco Science Fair.

The Product Show begins at 4:30 pm and features products relating to the HVAC industry from all over the Bay Area. Enjoy happy hour while you meet and greet vendors and colleagues, and see what's new in the industry!

After dinner, ASHRAE members and local students will be honored for their awards and each vendor will make a brief presentation.

Golden Gate Chapter President's Message, April 2007

Its time to clean up our carbon

Every day in the news we read more about the global impacts of greenhouse gas emissions on global warming. The scientific community tells us with certainty that global warming, the changes in the global weather conditions, and the continued future effects will be devastating to all future generations:

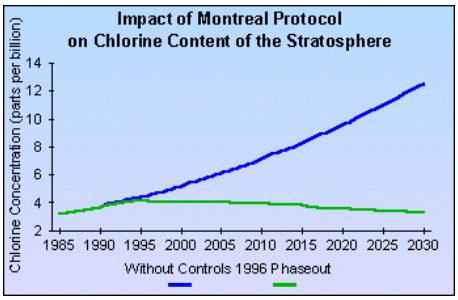
- The number of Category 4 and 5 hurricanes has almost doubled in the last 30 years.
- The flow of ice from glaciers in Greenland has more than doubled over the past decade.
- At least 279 species of plants and animals are already responding to global warming, moving closer to the poles.

If we continue down this path, expect catastrophic consequences:

- Deaths from global warming will double in just 25 years -- to 300,000 people a year.
- Global sea levels could rise by more than 20 feet with the loss of shelf ice in Greenland and Antarctica, devastating coastal areas worldwide.
- More than a million species worldwide could be driven to extinction by 2050.

We can't let this happen. We must take action, NOW! We can solve this.

In the 80's we learned about the negative environmental impact of refrigerants on the ozone layer. The international communities of the world rallied around this issue which led to refrigerant technician certification and world wide refrigerant protocols. The ES EPA website provides the graphical results of these interventions (right). Let's repeat this success with carbon gas emission reductions.



I recently attended a wonderful conference on creating "a clean, prosperous and secure energy future", Energy Crossroads, at Stanford University, March 1-3, 2007. The conference was put together by students with vision and conviction to work out solutions to the global warming problem. The knowledge and clarity of purpose I gained from this conference changed my daily life's perspective on everything we do. I already considered myself one of the committed. I work towards better, more efficient buildings. I already recycle, turn off the lights and have contracted to put photovoltaics on my home. After this conference I realize it is time to do more.

As mechanical engineers, we are society's energy custodians. We need to meet this challenge head on. Let me offer a few educational resources to help further your personal education on the subject.

1. See Al Gore's movie, An Inconvenient Truth. It explains the problem. http://www.climatecrisis.net/
2. Learn about the impact of buildings. Read this article, "It's the Architecture, Stupid! Who really holds the key to the global thermostat? The answer might surprise you." http://www.mazria.com/ItsTheArchitectureStupid.pdf
3. Read a great article about what steps we CAN take to solve this problem, "A Plan to Keep Carbon in Check" by Robert H. Socolow and Stephen W Pacala, faculty at Princeton University. The link is a PowerPoint presentation http://www.aaas.org/news/press_room/climate_change/mtg_200702/socolow_hotinski.pdf. The article is available from Scientific American, September 2006.

The Golden Gate Chapter is planning our spring seminar on "What We Can Do to Limit the Impact of Carbon Emissions." We plan a day-long event with these topics.

- Background: Where are we and how did we get here?
- How do we limit the impact of carbon emissions?
- The building industry's role in limiting the impact of carbon emissions.
- New financial, technical and social opportunities.

Stay tuned as we firm up our date and speakers for this important event.

Continued on page 4

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Dennis Thompson
Fahad Rizqi
Orion Moore

Golden Gate Chapter President's Message, April 2007 continued

April's meeting is our annual vendor showcase and student awards night at the Pacific Energy Center. This is a good opportunity to talk with our supportive vendors and find out what is new in the marketplace. It is also the student awards presentation where we honor the Bay Area Science Fair grade school age students who receive this year's Golden Gate ASHRAE Science Fair Awards.

Respectfully submitted,
Glenn Friedman, Chapter President

ASHRAE Research Report

Fahad Rizqi, Resource Promotion Chair, Golden Gate ASHRAE

To everyone that wants to donate to ASHRAE Research, I look forward to talking with you. Remember, all donations are tax deductible, and you may use a check or credit card. Now you can make your donation online at http://www.ashrae.org.

Topical Areas and Example Research Projects

- Design Tools
- Develop design tools for improving the energy efficiency of HVAC&R systems
- Develop design tools for improving IEQ in buildings
- Develop simplified tools to evaluate HVAC system options
- Improve and simplify design and simulation tools for HVAC&R systems
- Integrate the design, construction, operation, and maintenance processes
- Improve interdisciplinary coordination and communication during design
- Develop visualization tools for HVAC&R industry that enable architects and engineers to work together more effectively
- Develop designs for extraordinary incidents
- Develop prescriptive/performance based design standards
- Develop a multifaceted tool to evaluate all of a buildings energy and environmental impact parameters
- Develop design tools to address emerging industry trends and new building techniques (e.g. underfloor air distribution, dual facade building envelopes)

You can email me if any of you would like more information on the details of the research themes and possible research projects.

See you at the next meeting!!!
Fahad Rizqi, fahad.rizqi@siemens.com, 510-723-7833

Golden Gate Chapter Board Positions Nominations

The 2007 Golden Gate Chapter Nominating Committee is Dennis Thompson, Chair, Mike Scofield and Dick Charles. The nominating committee has completed a search to fill the two open positions of the Golden Gate Chapter Board of Governors. The nominating committee shall announce their recommendations at the April Meeting and call for a close to nominations at that time. If you have any board nominations for consideration, please contact the Nominating Committee Chair, Dennis Thompson at dennis.thompson@siemens.com. Thank you.

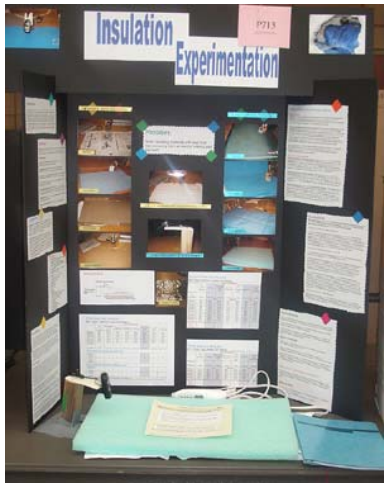
Student Activities

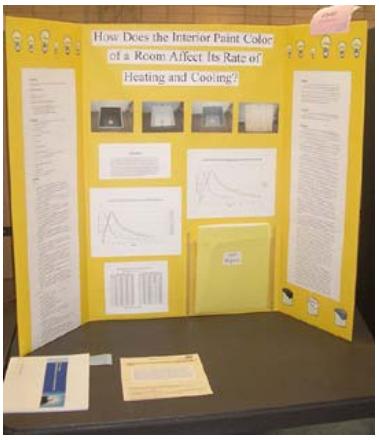
Tim Goeppner

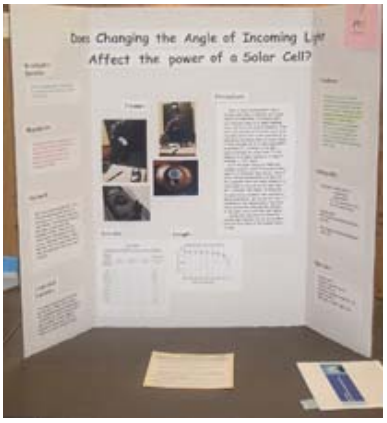
Don't forget this year's Don Bryant and Eric Thor Andresen student scholarships. Please promote this scholarship program to any students you feel may be deserving of this award. We want as many applicants as we can get. The instructions for applying and the application are downloadable from the GG web site, under Scholarships & Awards. The deadline for both is March 31, 2007.

Bay Area Science Fair Winners!

The 54th Annual Bay Area Science Fair was held from March 21-24, 2007. Tim Goeppner and Glenn Friedman (bottom photo) represented the Golden Gate ASHRAE Chapter as judges, and awarded four junior high and high school students for outstanding experiments and research in the physical science area.



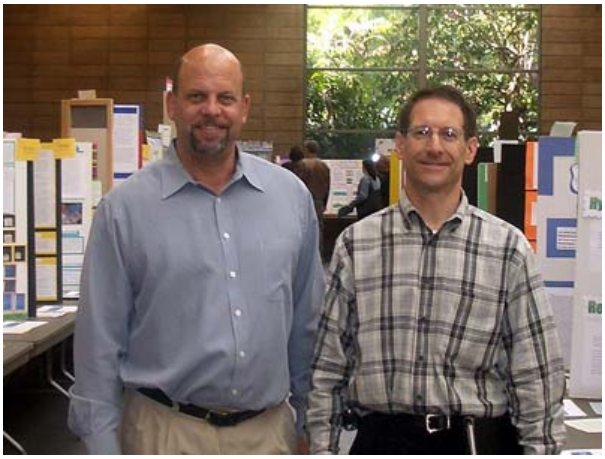




The winners were:

- Brian Seegers, 7th Grade, Portola Middle School, El Cerrito: "Insulation Experimentation" (upper left)
- Laura Laderman, 8th Grade, San Francisco School, San Francisco: "How Does the Interior Paint Color of a Room Affect its Rate of Heating and Cooling" (upper right)
- Adam Turtsanyi, 9th Grade, Alameda Community Learning Center, Alameda: "Does Changing the Angle of Incoming Light Affect the Power of a Solar Cell?" (lower left)
- Maia Singhal, 11th Grade, Carlmont High School, Belmont: "Harnessing the Wind: What Effect Does the Cover Shape Have on the Power Output of a Wind Turbine" (lower right)

Come celebrate the achievements of our future engineers and scientists as they receive their awards at the April meeting!



Membership Promotion

Kristin DeMartini, Membership Promotion Chair

Did you know ASHRAE membership and dues are not based on the calendar year? Each member has a different annual effective date and expiration date. This means it is never too late in the year to join or upgrade your membership and encourage others to join!

As a reminder, some of your member benefits include the following from Society:

- Access to member-only web pages.
- ASHRAE Handbook.
- ASHRAE Journal.
- ASHRAE Insights newsletter.
- HVAC&R Industry eNewsletter.
- Society Connections eNewsletter.

Please contact me if you are an active member and still need a name badge.

If you have any questions or suggestions, please contact me directly at Kristin.S.DeMartini@jci.com or 415-672-1048. Thank you!

UC Extension HVAC Courses

Temperature Controls for Heating and Air Conditioning Systems, a core course for the UC Berkeley Extension/Golden Gate Chapter co-sponsored HVAC/R certificate program will be offered this spring for ten weeks from March 21 through May 23, from 6:30-9:30 pm. This is a practical course that covers the design of control systems soup to nuts including topics on pneumatic, electric and DDC controls; sensors and control devices; development of point lists; energy efficient control sequences; open control protocols; issues for control retrofits; control system performance verification; and other topics. Several classes will be done in a workshop format. The course manual will be the ASHRAE Self-Directed Learning Course on HVAC Controls with supplemental notes by the instructors Steve Taylor and Mark Hydeman. ***This course is only offered once a year.***

X473 Temperature Controls for Heating and Air Conditioning Systems (EDP 313349) is one of the three core courses for the HVAC/R Certificate program co-sponsored by UC Berkeley Extension Service and the Golden Gate Chapter of ASHRAE. This course will be offered at the UC Berkeley Extension Service at 425 Market Street (at Fremont Street) in San Francisco. This classroom is conveniently located near the Embarcadero BART and MUNI stations. The course costs $625.

Registration information for the course is located at the UC Berkeley Extension Service website at: http://www.unex.berkeley.edu/cat/course159.html

Information on the HVAC/R Certificate Program is located at: http://www.unex.berkeley.edu/cert/hvac.html
Please contact Steve Taylor (staylor@taylor-engineering.com) or Mark Hydeman (mhydeman@taylor-engineering.com) if you have any questions.

ASHRAE Handbook Donations: Update and Thank You!

A special *Thank You* goes out to all the Golden Gate ASHRAE members who donated their handbooks in the last few months. A total of 41 Handbooks from our Chapter is on the way to India via air freight and should arrive in five weeks in New Delhi. The handbooks will then be distributed by a fellow ASHRAE member to the HVAC & R students who do not have handbooks. The shipping cost was generously donated by Flack + Kurtz in San Francisco.

By the way, did you know that India, and several Middle East Countries are in ASHRAE's Region At Large?

Chapter Technology Transfer Committee (CTTC)

Tyler Bradshaw, ASHRAE Golden Gate CTT Committee Vice Chair
http://www.ashrae.org/cttc, http://ggashrae.org/cttc

2007 Golden Gate Technology Awards

Congratulations and thanks to all of those who participated. Please join us at the upcoming April meeting where we will be announcing the results to the 2006 Golden Gate Technology Award competition.

It's not too late to start thinking about the 2007 competition. Please contact David Okada or myself on how you can participate in next year's competition.

Free ASHRAE Webinar

The ASHRAE CTTC is sponsoring a free webinar entitled "Indoor Environmental Design: Practical Solutions to Everyday Problems" this April 18th. Please visit www.ashrae.org/iedbroadcast to sign up or learn more about the topic and speakers.

Spring Seminar

The chapter seminar committee and the CTTC are working on bringing a great group of speakers to the bay area on the topic of global warming. Check back in the upcoming months for more details.

Government Activities

Assembly Bill 32: Global Warming Solutions Act of 2006 was signed into law September 27, 2006. It requires that the state reduce greenhouse gas emissions to 1990 levels by 2020— a 25% reduction! The California Air Resources Board (ARB) is responsible for monitoring and regulating greenhouse gas (GHG) emissions along the following timeline:

January 2007: Law becomes effective
June 30, 2007: ARB to publish list of early action GHG reduction
January 2008: ARB will adopt regulations on mandatory GHG reporting and verification
January 2009: ARB to provide plan for achieving statewide 2020 emissions limit
January 2010: ARB to implement early action measures.
January 2011: ARB to adopt emissions limits and reduction measures based on 2009 plan.
January 2012: Regulations become effective.

The Air Resources Board has formed committees to advise on implementation of the bill. The building industry is not currently represented on any of these, including the Technology and Economic Advancement Advisory Committee. Strong ASHRAE representation to subcommittees of the Technology and Economic Advancement Advisory Committee would be beneficial. For more information on the rapid developments around this bill, see http://www.arb.ca.gov/cc/cc.htm. If you are interested in getting involved, please contact the Golden Gate CTTC Chair David Okada david.okada@stantec.com.

Fresh Faces in the Chapter Technology Transfer Committee

My first month in the CTTC has been extremely rewarding and we all have big plans for the committee in the future. In addition to the items above, we will pursue developing a Blog and Website for technology transfer, reconvening the influential Codes Subcommittee, and partnering with aligned organizations on educational events. Please extend a warm welcome to our new Chair, David Okada along with Stan Boghosian to the CTT Committee at the next ASHRAE meeting. We invite other interested members to join us.

Minutes of Golden Gate Chapter Meeting—March 1, 2007

Dinner Meeting with Redwood Empire Chapter, Embassy Suites, San Rafael, CA

- Glenn Friedman, Golden Gate Chapter President, called the meeting to order at 7 PM.
- Self introductions
- Announcements
  - GGC meeting minutes from February 11 Lunch meeting, published in the March Fog Dispenser, were approved.
  - Scott Wayland – CTTC, introduced new CTTC committee.
  - Sadly, Member Wally Donnelly of Fresno recently passed away.
- Redwood Empire Business and Announcements - Tom Weaver
  - David McMinn of Santa Rosa became a Distinguished Fifty-Year Member.
- 7:55 PM – Program: Robert Marcial, President-Elect of the Golden Gate ASHRAE Chapter introduced the speaker, Jay Santos, of Facility Dynamics
  - Main Presentation: "Successful Control Projects: Why So Hard?"
- 8:45 PM – Questions and Discussion
- 8:50 PM – Marble draw, Redwood Empire Section
- 9:00 PM – Next meeting:
  Dinner Meeting Thurs., April 5th
  Annual Vendor Product Show and Awards Night
  Pacific Energy Center, San Francisco
- 8:50 PM – Meeting Adjourned

Jeff Blaevoet

From the Chapter Historian

Tom Gilbertson, GGASHRAE Historian

CECO, CECO, who remembers CECO?

The City of San Francisco had one of the most effective measures for improving energy efficiency in commercial buildings of any city in the country.

Can anyone tell me what CECO stood for, and how it worked? Next month we'll go over all the features of this excellent program, and find out what happened to it!

Upcoming Annual Tennis Tournament

Daylight savings gets people excited. More sun equals more smiles. Me? I smile when I have time to play more tennis and daylight savings means just that. And why should you care? Well it's time to dust off that racket and join me in practicing for the 2007 ASHRAE Golden Gate Chapter Eric Thor Andresen Memorial Tennis Tournament! We had record participation, in addition to record enjoyment, last year and this year is going to be even better. Stay tuned for details but if you have any questions or would be interested in helping to sponsor the event, please feel free to contact me.

James Gronek, james.gronek@sf.fk.com, 415-402-5824

Employment Opportunities

Senior Energy Engineer

Department Name: Capital Projects & Facilities Management, University of California, San Francisco

Responsibilities**:** Under the general direction and guidance of Manager of CPFM Engineering and Technical Services, the Senior Engineer (Energy) is responsible for planning, monitoring and coordinating energy programs/projects/contracts and EMCS for the University.

Qualifications**:** Graduation from college with a degree in engineering and five (5) years of engineering experience, including two (2) years of responsible design work in the area of building HVAC systems; or equivalent combination of education and experience; professional engineering license; at least eight years of mechanical engineering and energy related experience, and a current P.E. Mechanical registration.

To review full position description & requirements, please go to http://ucsfhr.ucsf.edu/jobs and apply directly to requisition 21523BR.

Contact: Eli Peña, HR Analyst, 415-476-1536

Mechanical Engineer

Job Duties:
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

9th Annual Redwood Empire ASHRAE Tournament

GOLF

FRIDAY, JULY 27, 2007

Blue Rock Springs Golf Course, East Course
655 Columbus Parkway, Vallejo, CA 94591

FOUR PERSON BEST BALL SCRAMBLE

SIGN-IN: 11:00 A.M.–12:30 P.M.
LUNCH: 11:00 A.M.–12:00 P.M.
TEE-OFF: 12:30 P.M Shotgun Start
DINNER: 6:00 P.M Approximately

DOOR **PRIZES**
RAFFLE **PRIZES**
HOLE **PRIZES**

NEW VENUE

BLUE ROCK SPRINGS GOLF COURSE

Course

Directions

Return by fax or mail with payment on or before July 13

Name _____ Company _____
Address _____ City/Zip _____
E-mail _____ Phone _____

Your Foursome
1. _____(Captain) 2. _____
3. _____ 4. _____

❒ Foursome Package $130.00/person
Includes green fees & golf carts, box lunch, buffet dinner (excellent!), beverages and more!
Total $520.00 for 4

❒ Single player $130.00
If you are a single, we will fill out a team for/with you

❒ Hole Sponsorship $130.00

❒ Includes a high quality framed 11"x17" color poster including your company name & logo.

❒ Dinner only $55.00

❒ I will donate this raffle prize _____

Dress Code: Collared shirt, no denim or jeans, soft spikes only

Please return to: Jessica Sanders

MK2 Engineering Inc.
1428 2nd St. Napa. CA 94559
Napa, CA 94559

Phone: (707).307.1500
Fax: (707).307.1550
E-mail: info@mk2eng.com

2006 - 2007 Event Calendar

Date	*Venue*	*Presentation Topic*	*Speaker(s)*
Thursday, Apr 5, 2007 Dinner & Student Night	Pacific Energy Center, S.F.	Vendor Product Show and Awards Night	Vendors and Award Winners
April 18th webinar	Webinar, www.ashrae.org/iedbroadcast	Indoor Environmental Design: Practical Solutions to Everyday Problems	
Thursday, May 3, 2007 California Culinary Academy	Annual Field Trip	Tour of the SF Federal Building	Craig Anderson and Staff
Thursday, Jun 7, 2007 Dinner & Spouse & Significant Other Night	Carnelian Room, S.F.	The Asian Century: Current Economic Development and Its Impact on Global Energy	Clark Bisel Flack & Kurtz (S.F.)
Friday, July 27, 2007	Blue Rock Springs Golf Course, Vallejo	9th Annual Redwood Empire Annual Golf Tournament	

Visit http://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 Robert Marcial at rmarcial@pacbell.net

Change of Address?

All members who wish to make changes in their membership data (change of email address, change of address or change of employer are the most common) must make those changes through the national ASHRAE site http://www.ashrae.org.

THE GOLDEN GATE CHAPTER CANNOT MAKE THESE CHANGES FOR YOU

In order to change your membership data, you will need your ASHRAE member number and confidential PIN number, both of which are on the ASHRAE card issued to you each year. Go to the Change of Address link of the ASHRAE website, log in, and then go to Membership Records. If you don't have your PIN or membership card, please call Customer Service: 1-800-5-ASHRAE (US and Canada).

Photos from the March 2007 Golden Gate & Redwood Empire Joint Chapter ASHRAE Meeting

Left: Speaker Jay Santos.

Right: ASHRAE meeting participants enjoy their meal.

Left: Tim Goeppner and Dale Yager

Right: Dave Troup, Mike Scofield, and Carl Jordan enjoying a laugh.

Left: Dennis Reis and Mike Khoury

Right: Dan Schuster and Hannah Yan.

Left: ASHRAE meeting participants deep in conversation

Right: Mike Southworth and Maya Salabasheva