

FOG DISPENSER



MARCH 2014 DINNER MEETING

MAIN PROGRAM:

2013 Updates to the Title 24 Energy Standards

SPEAKER:

GINA RODDA

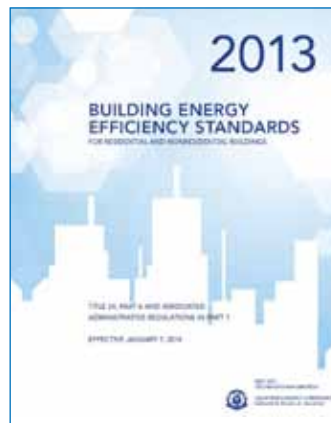
Gabel & Associates, LLC

Gina Rodda has been in the energy modeling field since 1991. Instructor of several dozen full day IOUs Codes and Standards trainings on the Residential and Nonresidential Title 24 Building Energy Efficiency Standards for building department staff and energy consultants and for the Nonresidential CEPE preparation webinar offered through CABEC. As a Certified Energy Analyst (CEA) and Certified Energy Plans Examiner (CEPE) through CABEC, and a LEED AP, she provides residential and nonresidential energy calculations for many building types throughout the state of CA.

PRESENTATION SUMMARY:

Join Gina Rodda of Gabel & Associates, LLC, as she presents an overview of the changes to non-residential building standards for new construction, additions and alterations, including:

- MECHANICAL SYSTEMS
- TITLE 24 FORMS
- ELECTRICAL POWER
- SOLAR READY
- BUILDING COMMISSIONING
- COVERED PROCESSES



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THURSDAY, MARCH 13
5:30 PM TO 9:00 PM

FOUR POINTS BY SHERATON
1010 NORTHGATE DRIVE
SAN RAFAEL, CA 94903

AGENDA:

5:30 pm
Registration and Social
Hour
6:30 pm
Dinner, Announcements
and Introductions
7:30 pm Main Program
9:00 pm Adjourn

Register at www.ggashrae.org

COST:

GG ASHRAE Members,

Before 5pm, March 7 \$45
After 5pm, March 7 \$50

Non-Members,

Before 5pm, March 7 \$55
After 5pm, March 7 \$55

Students/Voucher Holder

Free, but please register

GOLDEN GATE ASHRAE
FOG DISPENSER
VOLUME LII - NUMBER 5
MARCH 2014 COVER

2014 EVENT CALENDAR

► THURSDAY, MARCH 13

5:30 PM – 9:00 PM

LOCATION: Four Points by Sheraton, San Rafael

TOPIC: Overview of Changes to Title 24 Energy Standards

SPEAKER: Gina Rodda, Gabel Associates

► MONDAY, APRIL 14

Oakland Unified School District Downtown Educational Complex Tour and Happy Hour

► THURSDAY, MAY 8

5:30 PM – 9:00 PM

LOCATION: PG&E Pacific Energy Center

TOPIC: Awards and Product Show

► THURSDAY, JUNE 12

5:30 PM – 9:00 PM

LOCATION: Scott's Seafood Jack London Square, Oakland

TOPIC: Golden Gate ASHRAE – Past, Present, and Future

SPEAKERS: Tom Gilbertson and YEA Chair

EMPLOYMENT OPPORTUNITY

Senior HVAC Engineer Wanted

Summary

Integral Group seeks an HVAC Engineer with excellent communication skills, and project management experience. Design energy efficient HVAC systems, build strong client relationships, and work with project schedules and budgets. Proactive, motivated and passionate about developing the most energy efficient strategy for the client. Excellent benefits and competitive salary.

Required

- 7+ years of experience in MEP consulting
- Excellent communication skills: articulate, assertive and confident
- Knowledge of AutoCAD/Revit
- BS degree in Engineering or similar degree

Desired

- LEED AP
- PE License
- Experience with sustainable design
- Passionate about energy/water/climate/social issues

Contact

Please send resume and cover letter to tbradshaw@integralgroup.com

ANNOUNCEMENT

2014 PRODUCT SHOW ANNOUNCEMENT

By Hans Kaufmann, Product Show Chair

The annual Golden Gate Chapter ASHRAE Product Show will be held on Thursday, May 8th, 2014 at the PG&E Pacific Energy Center in San Francisco. This annual event is a main fund raiser for the chapters' contribution to ASHRAE Society Research projects. If you are a GG ASHRAE member the price for a 3'x6' table is \$150, with dinner costs in addition to the table charge (non-member table cost is \$200.00).

Please consider exhibiting at the show. You'll get exposure to a great group of engineers and contractors and you'll be helping out the ASHRAE Society Research Projects at the same time. We would love to see you there.

Call or email me for an application. You can pay by check or with PayPal.

If you have any questions about this event, please don't hesitate to contact me at hkaufmann@calhydro.com or phone: 510-266-7885 to get an application form.

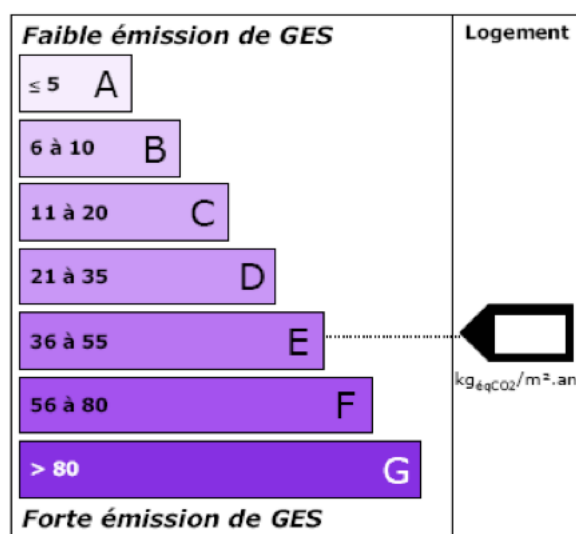
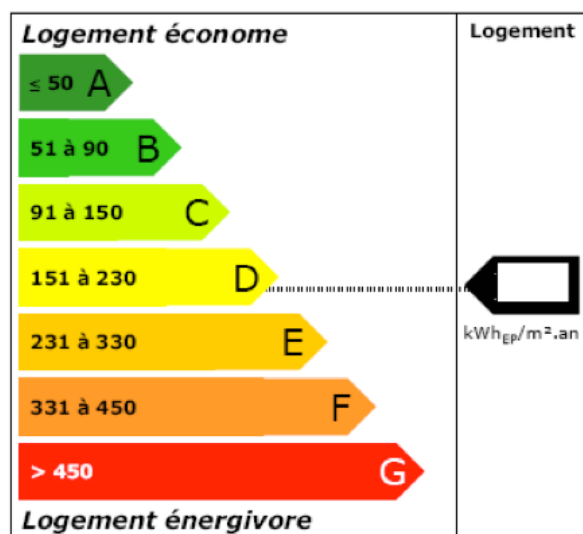
See you at the next meeting!



Hello Golden Gate ASHRAE Members!

I am currently in France for family reasons, and I can't help noticing the differences between my home country and my adopted country – they are numerous of course, and some of them are relevant to the building industry. Some are visually obvious: here, all houses have either shutters or blinds, and apart from providing dark sleeping conditions (which are preferable for a good night sleep), they also provide a really good barrier to cold penetration in winter (and keep the sun out in summer). Most houses have double-glazing too.

The difference is also in the realtor's window (and not only for the price of housing). When you buy or rent a property, you can see a "Diagnostic de Performance Énergétique" (Diagnostic of Energy Performance) made up of 2



graphs, an Energy label which tells you the primary energy use, and a Climate label which tells you the quantity of greenhouse gas emitted (see examples of graphs below – I found these graphs on the website of the French Department of Energy, Sustainability and Ecology).

These graphs are similar to the ones you now find when you want to purchase a new appliance (dishwasher, fridge, etc.). They're not perfect, but they enable the consumer/buyer to make direct comparisons between appliances, or in Europe, between lodgings.

I think it's a great idea and I hope it will happen soon if not in the US, then in California.

Our March meeting is our joint meeting with the Redwood Empire Section. Please join us on Thursday 13th March for another great meeting.

Isabelle Lavedrine

“History” ...is made too fast....things move too quickly....and soon they are in the past....eventually you realize that events and rhythms that were so eminent....are gone.....and we may not even stop to reflect upon them...items that were SO important...drain away....into the sands of time.

Tom Gilbertson, Chapter Historian



The 2014 International Air-conditioning Show...and ASHRAE's 2014 Winter Meeting...are now“history”.

Kent Peterson the former ASHRAE Society President (and from our own Region!).....was awarded at the Winter Meeting, the F. Paul Anderson Award for....“notable achievement, outstanding work, or service in any field of the Society” A truly “big deal”!....and indeed worthy of note!....an honor to be remembered in the same vein as F. Paul Anderson!....Good going Kent!

Consider the career that F. Paul Anderson had, especially in reference to our Society.... Born in 1867....2 years after the end of the Civil

War....a graduate of Purdue in 1890....and then serving 43 years as the Dean of Engineering at Kentucky A & M.... “F. Paul” fostered interest, and standards for our industry...before there was much of an “industry”.....lets think about the timing of F. Paul Anderson...born-1867...that is just two years *after* the end of the Civil War.

Did any of you readers “know” or “meet” someone who was born during the Civil War?....My grandfather was born in 1861... and told me real stories about real Indians, and real teepees and how on the farm the Indians built a open-fire *inside* of their teepees...and managed to survive the -25 F to -30 F Winter-weather.....Grandpa celebrated using ASHRAE-related technology by having a “stove”...instead of a “fireplace”....(A bit of history as a reminder... Ben Franklin invented the “Franklin Stove”....an invention that *increased the efficiency* of the action of “burning “wood”...by over 400%. This was a “big deal”...Look at it this way... with a “stove” you only had to cut one-quarter of the wood that you needed to keep warm...when compared to having a “fireplace”!)....I suspect that Ben was entitled to at least an “Innovative-LEED point”.....and I don't remember doing anything that increased efficiency by 40%...let alone 400%!

Ben Franklin....by the way...is the “Patron Saint of ASHRAE”....I bet that you didn't even know we had a “Patron Saint”!

History, in retrospect.....looks very strange when we view what seemed important... from today's vantage point...imagine trying to down-load the latest App...with smoke from that open fire constantly getting in your eyes!

What stories are you going to tell your grandchildren?



Mechanical Issues in the Building Code— Smoke Control

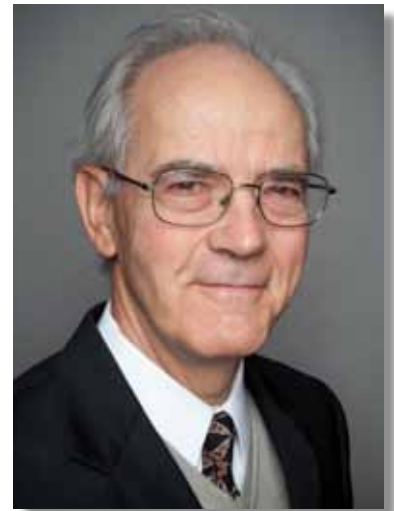
Rick Paillon, PE
Golden Gate ASHRAE Past President

The requirement that certain types of buildings have smoke control systems is contained in the building code—the California Building Code in this state. Chapter 4 of the CBC requires smoke control for the following special occupancies:

High rise buildings—over 75 feet elevation of the top occupied floor to the ground.

Atriums—open areas two or more stories.

Underground buildings—with a level for occupancy greater than 30' below the level of discharge. Parking garages are exceptions.



In addition to the above, smoke control systems are sometimes provided for other occupancies including hospitals even when not required by code.

Section 909 of the CBC gives the general requirements for the various types of smoke control systems that are required. Smoke control systems are either designed to limit the amount of smoke by exhausting it (atriums only) or to prevent its spread from one part of the building to another by the use of air pressure differentials. In either case the code requires a rigorous analysis of the dynamic forces that cause smoke to spread. The effects of wind, climate, temperature, and building height must be taken into consideration. This analysis is usually done by a specialist who may use computational fluid dynamic analysis.

Even though a specialist may determine the air quantities required to control smoke, the mechanical engineer is usually left with the task of designing and filling in the details of the actual smoke control system. The normal HVAC system is commonly used for creating the pressure differentials between smoke zones required for smoke control. In addition separate fans, shafts and controls are required for stairwell pressurization. The special requirements for smoke control systems and equipment are found in CBC Chapter 9.

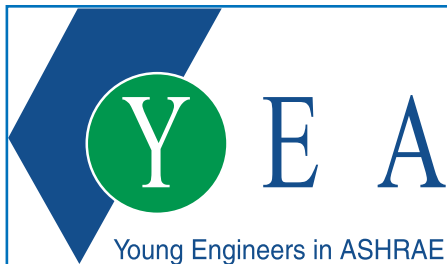
The architect also plays a big role in the smoke control system design because he/she determines where smoke partitions are located and how they are constructed and tested. Smoke controls don't work if the smoke zone separations are too leaky. The architect must also locate shafts for smoke control ducts, so coordination should begin early in the design process.

Smoke control systems must be tested in all modes of operation—that is with each and every zone being simulated as the fire zone. Give this some thought if there are several smoke compartments on the same floor. Although it may be possible to depressurize each and every zone from all the others, the number of different damper sequences could become so high that the system becomes impractical to test and maintain. Sometimes when a building has more than one smoke zone on a floor it simplifies things if separate duct shafts are provided for each smoke zone. This minimizes duct penetrations through smoke barriers.

If you create a system where it is required to have a duct penetration of a smoke boundary open at all times for the smoke control system to function properly, you may consider omitting the smoke damper at that location (at up to \$4,500 a pop). The code allows this; however, the smoke zones must be able to be isolated from one another when the building fans are not running.

A major component of a smoke control system is the fireman's control panel which can be used by the fire department to monitor and override the smoke control system. This also is usually designed by the mechanical engineer and is again regulated by CBC chapter 9.

Remember that when a smoke control system is required there is also a requirement for emergency power. If the emergency generator is located within the building it will require combustion air (CMC chapter 7) and an exhaust pipe out of the building (CMC chapter 8).



The Young Engineers of ASHRAE (YEA) is committed to encourage participation from our Golden Gate members 35 years old and below. Please contact John Gardner (JGardner@victaulic.com) with any comments or if you are interested in becoming more active in our group. YEA hosts social events, technical tours, and helps with outreach to young students in the Bay Area.

For more information on Golden Gate YEA check out: [Golden Gate YEA](#) is on Facebook!



Upcoming event on Title24

A date for title 24 event still has not been settled upon yet but the Golden Gate YEA committee will be hosting Mark Hydeman PE and Principal at Taylor Engineering to conduct a seminar covering updates on Title24 and how YEA members can get involved in California policy.

- **Overview of Title 24**
- **Overview of the New HVAC & Process Requirements**
- **Complying & Documenting Title 24**
 - *Overview of the HVAC Acceptance Tests & HVAC Compliance Forms*
 - *Responsibly parties for documentation*
 - *Process and milestones during construction*
- **What can young engineers do to become more involved in Title 24?**

There will be an EventBrite email invite sent out to everyone shortly please RSVP through. If you are not on the list please email jgardner@victaulic.com

Hope to see you there.



Christopher Daniel,
ASHRAE Golden Gate CTT Co- Chair

Christine Lee, ASHRAE Golden Gate Co-Chair

Technology Award Deadline March 31!

The ASHRAE Golden Gate chapter is now accepting applications for the 2014 Technology Awards. If you have a project and/or building in which you have participated in the design process please submit an application for your deserved recognition.

ASHRAE Technology Award applications are accepted in each of the following categories:

- I. Commercial Buildings (New and Existing)
- II. Institutional Buildings (New and Existing)
 - Educational Facilities
 - Other Institutional
- III. Health Care Facilities (New and Existing)
- IV. Industrial Facilities or Processes (New and Existing)
- V. Public Assembly Facilities (New and Existing)
- VI. Residential (New and Existing)

Deadlines for the Golden Gate Chapter applications will be March 31st.

Please do not hesitate to contact Christopher Daniel at cdaniel@accoes.com or 415.889.9772 or Christine Lee at christine.lee@arup.com.

MARBLE DRAW



A big thanks to our sponsors of the February lunch meeting, Sigler and Victaulic! Congratulations to those who won prizes from the raffle!

We are always looking for sponsors for our meetings. Please contact us if you are interested in sponsoring the prizes for future meetings. If your company donates prizes, your company's logo will display on a slideshow during the non-speaker portions of the meeting. You'll also know that your firm helped to fund ASHRAE research and scholarships!

For more details contact Kevin Edstrom,
Kevin.Edstrom@wspgroup.com





Nikola Kravik, Membership Promotion Chair

Mentorship Committee Chair NEEDED!

In recent years of the economy getting back on track and the society membership steadily growing, we have all experienced the need for dedicated Mentorship Committee Chair within our Chapter. It's interesting that we have had a lot of folks helping out tremendously to mentor and coach newcomers and transfer folks in any possible business way, but we need more of the personal relationship that will develop the future Golden Gate ASHRAE Champions of industry. I have found that many sources refer to mentorship about something whose boundaries can be elusive sometimes....here are few associated words: personal development, apprentice, guide, ad hoc help, learning, dialogue, challenge, transfer of knowledge, social capital, wisdom, reverse mentoring....Let me or some of the Board Members know if you have someone in mind. We would be happy to share details with you on the responsibilities and requirements for the position!

WATER Conservation ALERT!

Hope everyone is aware of the water crisis in California and globally, so please conserve in any way possible.

I encourage everyone to attend the upcoming March joint meeting with Redwood Empire on Thursday, 13th. Main topic will be T-24 New code changes and presentation by the California Air Resource Board. Remember that you have a chance to get a free meal: if you bring a non-member to lunch or dinner and they join Society and the Chapter by the following chapter meeting you will get your next meeting on us!

MEMBERSHIP ADVANCEMENT

If you are an Associate member, becoming a full member may be easier than you think. The following count toward the 12 points necessary to advance to full Member status. You must update your biography on the Society web site and email membership@ashrae.org to advance.

Non-accredited degree = 4 points

Accredited degree = 6 points

P.E. = 3 points

Every year working in industry = 1 point

Since last time I gave you an update a month ago, we have 7 new members and 1 new student:

ASSOCIATE

Mr Paul Correa

Mr Jason Lee Cho

Ms Janet Lynn Peterson

Mr Robert Chen

MEMBER

Mr Chris Reyes

Mr Daniel Neitz

Mr Clyde Murley

STUDENT

Fatih Turan

To become a member of the Golden Gate Chapter you must first be a Society member (www.ashrae.org/membership/page/589). If you are currently a member of Society and wish to join the Chapter, you can synchronize your renewal dates by paying pro-rated Chapter dues. Society membership is \$190 for Affiliates, Associates and Members and \$20 for students; Chapter membership is \$50 for Affiliates, Associates and Members and \$20 for students. Full time students dine free all year and Student Transfer membership allows you to maintain a reduced membership for the two years following graduation. Contact me for more information (nkravik@willdan.com).

ASHRAE's SmartStart Program



I want to remind everyone about the effort for the SmartStart student program I mentioned in our last newsletter - be different - if you know a student and he is wondering what's next help him with the ASHRAE SmartStart program, more details here. For \$120 it's the best money spent of them and 3 yrs of networking that people forget and students need it the most!

Now it's the right time (Valentine's day) to sub the chocolates and flowers with something different, maybe an ASHRAE Membership to your loved one!

If you are interested, contact me personally and I will discuss the stories of at least 5 examples of recent graduates and students that have benefited in many ways from joining Golden Gate ASHRAE, Redwood Empire or the San Jose Chapter.

<https://www.ashrae.org/membership--conferences/student-zone/membership-and-meetings/ashraes-smartstart-program>



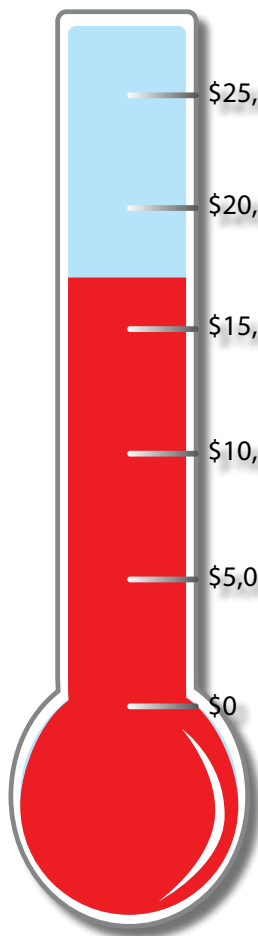
Zberri Alvi Research Promotion Chair

2013-2014 Donors

Following individuals and companies have generously supported ASHRAE Research and Golden Gate Chapter for the 2013-14 Campaign.

Get to know ASHRAE Research through Golden Gate Chapter's website at www.ggashrae.org. Explore Research and Promotions sub-pages in the left column to see how ASHRAE Research is changing our lives.

Your contributions are much appreciated. Thank you for making a difference and shaping tomorrow's built environment today.



ORGANIZATIONS

\$2,000 and Up

Bay Area SMACNA

\$1000 to \$1999

Norman S Wright
PG&E
Reliable Controls
Sigler Inc
Titus

\$250 to \$999

Acutherm
Affiliated Engineers
Air Treatment Corporation
California Hydronics Corporation
Conservation Mechanical Systems
DMG North
Guttman & Blaevoet
HSC Commercial
Interface Engineering
Marelich Mechanical

Peterson Mechanical
REHAU
Southland Industries
Taylor Engineering
Ted Jacob Engineering Group
Western Allied
WEBCOR

INDIVIDUALS

\$1,000 to \$1999

Glenn Friedman

\$250 to \$999

Steve Taylor
Tom Weaver

Up to \$249

Zberri Alvi
Ma'ayan BenNaim
Kyle Blocker
Tyler Bradshaw
Michelle Dionello
Kevin Dowling

Annie Foster Courtney
Tim Goepner
Dick Friedman
Carl Jordan
David Jump
Erik Kolderup
Nikola Kravik
Isabelle Lavedrine
Glen Leggoe
Eugene McCabe
David Nazzaro
Andrew Ostrowski
Jack Palmer
Wasil Papow
Peter Rumsey
Matt Russell
Dennis Thompson
Cassie Waddell
Mark Walton

Donations are tax deductible, by check, credit card or online at

www.ashrae.org/contribute

Mail Checks to: ASHRAE RP: 1791 Tullie Circle, NE: Atlanta, GA 30329

For more information, please visit Research and Promotions section on www.ggashrae.org

or contact RP Chair Zberri Alvi at (510) 206-9905, zalvi@dmgn.com

Our goal for this year is to raise \$24,500 for ASHRAE Research

Goal: \$24,500 Contributions: \$16,751



John Williams, Student Activities Chair

Golden Gate Chapter 2014 Student Scholarships

ASHRAE's Golden Gate Chapter is calling for applications from Student members for Scholarships to be awarded this year. Please find the descriptions and application requirements below.

Please contact me for a copy of the application:

d +1 415 946 0230 | m +1 415 290 6791 | john-g.williams@arup.com

Applications are required by April 11th

The scholarships were established to provide financial assistance to local University, state university or community college students based within the Chapter bounds. It is intended to introduce students to the technical, educational and social benefits that can be derived from the Society and Local Chapter. Please note that scholarships may only be awarded to an individual once.

To encourage diversity in the awards we try to get applications from different parts of the educational community and encourage all to apply:

- *Graduate Programs*
- *Undergraduate Programs*
- *Higher Education / Community Colleges*

The amount of the scholarship will vary depending on the strength of the application and the Fund from which the scholarship is awarded.

Graduate Studies

Candidates for this scholarship will be selected from students studying a wide range of topics related to the HVAC&R industry at graduate level. They will be enrolled in a course related to the study of refrigeration or air conditioning, including comfort, energy usage and controls and have a serious goal of continuing with a career related to the field after their course finishes.

- The amount of the scholarship varies up to \$3,000 subject to an evaluation of the required documents and an interview.
- The applicant must demonstrate interest in HVAC&R by describing their specific area of study
- Submit a personal statement (one pages or less) on how your graduate studies will benefit and/or impact HVAC&R related industries. It will be judged on the basis of originality, knowledge of the industry, correlation between student's background and objectives, structure of thoughts, and logic of conclusions

Additional Requirements for all Scholarships:

- Recommendation from Advisor, Dean or Department Chair
- Complete resume of completed courses, work experience, and general interest

Undergraduate Junior/Senior Award

The candidates for these scholarships will be selected from students who are enrolled in an engineering or technical curriculum and show an academic interest in refrigeration and/or air conditioning related courses, including controls with a serious goal of entering the field of HVAC&R Engineering after graduation.

- Scholarship to be granted to an enrolled full time Engineering student who has a cumulative 3.5 GPA.
- The student will be in their junior or senior year at time of application
- The amount of the scholarship to vary varies up to \$3,000 subject to an evaluation of the required documents and an interview.

continued on next page

- The applicant must demonstrate interest in HVAC&R by having taken or enrolled in one or more related course or project.
- Submit a short essay (one pages or less) on "Why mechanical engineering that pertains to heating, refrigeration, and air conditioning is or will be my chosen career." The essay will be a major factor in the selection process. It will be judged on the basis of originality, knowledge of the industry, correlation between student's background and objectives, structure of thoughts, and logic of conclusions.

Additional Requirements for Scholarships:

- Recommendation from Advisor, Dean or Department Chair
- Be a full time student (12 units or more)
- Complete resume of completed courses, work experience, and general interest
- Photocopy of last semester/quarter college/university transcript

Community College Award

The candidates for these scholarships should be selected from students who are enrolled in a technical curriculum focused on refrigeration and/or air conditioning, with a serious goal of entering the field of HVAC&R Engineering after graduation.

- The scholarship awards vary from \$500 to \$1,000.
- Must have C average or higher.
- Must have completed at least one course in the HVAC program
- Submit a short essay (one pages or less) on "Why mechanical engineering that pertains to heating, refrigeration, and air conditioning is or will be my chosen career." The essay will be a major factor in the selection process. It will be judged on the basis of originality, knowledge of the industry, correlation between student's background and objectives, structure of thoughts, and logic of conclusions.

Requirements for Scholarships are as follows:

- Recommendation from Advisor, Dean or Department Chair.
- May be a full time or part time student
- Complete resume of completed courses, work experience and general interest
- Last semester/quarter college transcript

Grants and Scholarship Funding

Two funds exist that support the scholarship funding of the Chapter.

Eric Thor Andresen Memorial Scholarship Fund

Eric Thor Andresen was a young engineer and ASHRAE member both in Society and the local Golden Gate Chapter. He was living in San Francisco and working for Glumac & Associates, at the time of his death on Easter Sunday April 15, 1990. Eric was born on January 29, 1961 and was the only son of Flemming and Svava Andresen and brother of Denise.

Eric was a graduate of Penn State where he studied Architecture and played on the Tennis Team. Eric was a strong believer in the protection of the environment and wished to work towards this goal to help clean it up by efforts in his chosen profession. The Andresen Family and the Golden Gate Chapter of ASHRAE established a memorial Scholarship Fund in his name on April 30, 1991 with a Memorandum of Understanding.



The purpose of the Eric Thor Andresen Memorial Scholarship Fund (ETAMSF) is to provide some financial assistance and encouragement to a qualifying student with the intent to help them further their education and pursuit of academic excellence in the area of energy conservation, control of the indoor environment or related areas of interest in the HVAC field.

There are some specific eligibility criteria for this scholarship, regarding college location, choice of Engineering or Architectural study major and ASHRAE student chapter affiliation with the Golden Gate Chapter. Any student selected cannot have received the scholarship before and must be attending classes' full time, or be enrolled in an authorized work/study program. The final selection of a student to receive the ETAMSF Award is made by the Student Activities Committee and approved by the Chapter Board.

The monies for this Scholarship are from the interest earned on the principal of the Fund. The Golden Gate Chapter of ASHRAE is the administrator of this account and its investment portfolio. There have been annual Tennis Tournaments sponsored by the Chapter for the purpose of raising money to increase the principal of the ETAMSF. The Andresen Family has been generously matching those amounts and other family and friends of Eric have continued to send memorial checks to build the principal and allow for a larger scholarship amount.

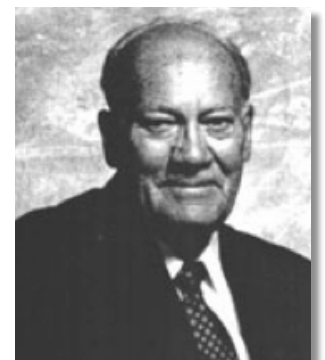
The Golden Gate Chapter is proud to annually award the ETAMSF check in Eric's memory, to help continue his legacy to the environment through better HVAC, keep his youthful spirit alive in the Chapter Tennis Tournaments and to aid and support the Student members of ASHRAE achieving their educational goals.

Golden Gate Chapter Scholarship in memory of Don Bryant

Donald C. Bryant, Sr. was a well-known and honored member of the Golden Gate ASHRAE Chapter community and an ASHRAE Fellow. Mr. Bryant was an educator whose long and dedicated career spanned more than 40 years.

His contributions to the teaching of the science and technology of engineering read like a chronicle of the professions concerns and growth from the postwar retraining era through the development of nuclear energy to the age of energy conservation.

Mr. Bryant began his teaching career at the University of California, Extension as an instructor of engineering design in 1946. In the 1950s, he taught the first in a series of courses in heating, ventilation, air conditioning, and refrigeration developed to meet the needs of the mechanical engineering profession. These courses later formed the basis of our HVAC-R Program, a curriculum that is professionally recognized by a certificate from the Golden Gate Chapter of the American Society of Heating, Refrigerating, and Air Conditioning Engineers (ASHRAE).



The hundreds of students who have passed through his curriculum have lauded his practical approach to the fundamentals and insights for design practice.

"He has believed in and committed himself to ongoing education for those in the field of HVAC with constant support and empathy for the student—a real contribution.

Mr. Bryant was a faculty member of City College of San Francisco and the Curriculum Coordinator and Adviser for our HVAC-R Program.

Registration Open for ASHRAE High Performance Buildings Conference in San Francisco



The conference topics provide a comprehensive overview of high performance building design with a focus on strategies in several areas. New subject areas include water efficiency, building occupant behavior, new building technologies and indoor environmental quality. In addition, there is increased emphasis on lighting/daylighting and the building envelope.

The conference features several invited speakers and keynote speakers, including:

- Peter Rumsey, Rumsey Engineers, Inc., presents “The Process of Radical Innovation in Buildings”
- Jerry Yudelson, author of “The World’s Greenest Buildings: Promise vs. Performance in Sustainable Design,” leads an interactive session on “Design with the End in Mind”
- Gail Brager, associate director, Center for the Built Environment at the University of California — Berkeley

For more info see: <http://www.hpbmagazine.org/hpb2014>.

ASHRAE Travel Grants Available for Graduate Students

Did you know that the College of Fellows awards Graduate students up to \$2,000 to attend two ASHRAE Conferences (\$1,000/conference)? These funds go directly to the selected candidates to cover travel, lodging and meals!

In addition to the defrayed costs, these award recipients are mentored prior to and during the meeting, having one on one help in determining which sessions and Technical Committee meetings they will attend and introductions to various ASHRAE Members who also specialize in their chosen area of research. This award allows future HVAC researchers the ability to become involved with ASHRAE TCs and participate in preparing and potentially bidding on ASHRAE projects

The requirements are:

- be an ASHRAE Student Member,
- be a Ph.D. candidate within 24 months of graduation
- have a thesis topic within ASHRAE’s scope of research.

The candidate must complete both pages of the Travel Award Submittal Form, which includes a one page (maximum) statement on the candidate’s research. Selected candidates will be expected to coordinate their own travel and lodging.

continued on next page

The award application and details may be downloaded from the ASHRAE College of Fellows website (<http://ashrae.us2.list-manage.com/track/click?u=9152ea0504b540c6f2c44b24b&id=54e4a6bbd5&e=15e900711c>). Submittal may be by email (submit to COF@ASHRAE.org (mailto:COF@ASHRAE.org)) or mail to Patricia Adelman, Manager ASHRAE Fund-raising, 1791 Tullie Circle, Atlanta, GA, 30329. All applications must be received by April 11, 2014 and award recipients will be notified by May 9, 2014.

ASHRAE Job Service Board

ASHRAE partners with the job board service Bird Dog to promote employment opportunities for the ASHRAE community. This effort is called ASHRAE Jobs. The link to ASHRAE Jobs (www.ashraejobs.com) can be found on the ASHRAE home page.

Forbes Magazine ranked engineer one of the 10 hardest jobs to fill in the US today. 4 of the top ten positions included engineer, skilled trades, technician and sales. Reasons for this vary, but emerging macro level trends include:

- **The Obama administration's pledge to rebuild America's energy grid, energy efficiency incentives and infrastructure is increasing the need for talented engineers.**
- **There are far too few new college graduates in engineering to replace retiring engineers.**
- **Employers don't want to hire two or three engineers with a variety of specialties. They want one engineer who is trained in several areas.**

Today, employment specialists see successful companies shifting their talent acquisition strategies from being reactive to an "always recruiting" proactive approach. Another trend is organizations recruiting for attitude and cultural fit and then training new hires to do the job.

Since ASHRAE migrated ASHRAE Jobs to reside in the BirdDog applicant tracking system (ATS), ASHRAEJobs is now a one-stop location where your employers can search for certain skill sets and demographics that they are "always looking for" and build a talent community.

Another Milestone for Refrigeration Regulation in California

March 1st marks the latest California deadline for registration and reporting of facilities with non-residential refrigeration systems under state regulation intended to minimize leaks of environmentally harmful refrigerants with high Global Warming Potential (high GWP).

Companies are required to register their refrigeration system with the California Air Resources Board (ARB) by March 1, 2014, if the single largest system at an individual facility has a full charge of 200 pounds or more of the following refrigerants:

chlorofluorocarbons (CFCs), hydro chlorofluorocarbons (HCFCs) or hydrofluorocarbons (HFCs) with GWP of 150 and above.

The online registration and reporting tool, known as the "Refrigerant Registration and Reporting System," or R3, is available at <http://www.arb.ca.gov/rmp-r3>. Additional information and training webinars on how to use the tool are available on the [program's website](#).

Facilities with a full charge of greater than 50 pounds but less than 200 pounds of high global warming potential (high-GWP) refrigerant are not required to register until 2016. However, these systems are subject to leak inspection, repair and recordkeeping requirements of the rule that are in effect now. Facilities with "Large" refrigeration systems with a refrigerant charge of 2,000 pounds or more should have already registered and must continue to submit annual reports to ARB.

It is important to note that refrigeration systems using ammonia and carbon dioxide are not subject to the rule since those refrigerants are not classified as high global warming substances. Air conditioning systems used exclusively for cooling occupants of a building (known as "comfort cooling") also are not required to register.

Though costs will vary from facility to facility, the leak detection, monitoring and repair requirements of the rule are expected to result in overall cost savings. Identifying and repairing leaks promptly reduces the need to buy costly refrigerant to refill the system.

For more details on the rule applicability and requirements, please review Frequently Asked Questions (FAQs) available at: <http://www.arb.ca.gov/cc/reftrack/rmpfaq.pdf>.

For additional information about the Refrigerant Management Program, please visit: <http://www.arb.ca.gov/StopRefrigerantLeaks>. If you have questions regarding RMP registration and reporting requirements, you can also email reftrackinfo@arb.ca.gov or call the RMP Helpline at (916) 324-2517.

ARB's mission is to promote and protect public health, welfare, and ecological resources through effective reduction of air pollutants while recognizing and considering effects on the economy. The ARB oversees all air pollution control efforts in California to attain and maintain health based air quality standards.

Refrigerant Management Program

Registration deadlines approaching

Affects systems with R-12, R-22, R-404A and other fluorinated gases



Large

≥ 2,000 lbs. of high-GWP refrigerant

Large facilities must register & report by March 1, 2012 and annually thereafter



Medium

≥ 200 lbs. < 2,000 lbs. of high-GWP refrigerant

Medium facilities must register & report by March 1, 2014 and annually thereafter



Small

> 50 lbs. < 200 lbs. of high-GWP refrigerant

Small facilities must register by March 1, 2016

California Environmental Protection Agency

 **Air Resources Board**

Decoding HVAC: Let's Talk Verification of Small Commercial HVAC Changeouts

The California Statewide Codes & Standards Program is pleased to announce its FREE 90-minute interactive online event to discuss and decode Title 24, Part 6 requirements for small commercial HVAC changeouts under the 2008 AND 2013 standards. Although originally designed for building department personnel, due to the high level of interest from other industry professionals, we are now opening these sessions up to a wider audience.

Not your typical webinar, this event is designed to both offer and gather information on technical aspects of the code, "best practices," and the challenges you may face in the field. Our technical experts will guide the discussion based on the answers you and your colleagues give to questions we'll ask you at registration.

Gina Rodda of Gabel & Associates, LLC along with her guest speaker David Wylie, of ASWB (formerly ASW) Engineering Management Consultants, Inc., want to hear from YOU on small commercial HVAC changeout issues like:

- Installation practices
- System requirements
- Concerns as we transition from the 2008 to 2013 energy standards
- Available job aides and resources

DATES & TIMES: 4 sessions currently offered, choose the one that works for you —*availability subject to enrollment levels:*

DATE	TIME
Monday, March 3	8:00am – 9:30am 3:00pm – 4:30pm
Tuesday, March 4	8:00am – 9:30am
Wednesday, March 5	8:00am – 9:30am

Register Now: <http://registration.energycodeace.com/content/registration-form>
Location: Online - Log-in information will be sent with your registration confirmation
Cost: Free
Questions? Contact us at online.training@EnergyCodeAce.com
More Information: <http://bit.ly/1k565H1>

FEBRUARY LUNCH MEETING RECAP



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