



ASSOCIATION OF
ENERGY ENGINEERS

Bay Area Chapter

NEWSLETTER

April 2002

Meeting Information Tuesday, April 23, 2002

AEE Bay Area Chapter Presents

Cash for Kilowatts

Current Incentive Programs that affect Bay Area businesses with a focus on one CEC Peak Load Reduction Program

6:00 - 6:30 p.m.

Social

6:30 - 7:30 p.m.

Dinner

7:30 - 9:00 p.m.

Chapter Business and Presentation

Location:

ZZA's Trattoria, Oakland

Cost: \$30.00/Members
\$35.00/Non-members
\$15.00/Student

Reservations: Call Bruce Chamberlain at (510) 482-4420 ext 227 or FAX (510) 482-4421. See insert for more information.

President's Message

Say What?

What's the greatest benefit of e-mail? No criticism for penmanship, of course. Aside from spam, we are sending too many e-mail messages, stuffed with too much information, from too many people. Most companies don't have set guidelines for appropriate use of e-mail. I recently found some basic guidelines for e-mail etiquette on Buildings.com that you might want to review.

- ✍ Send e-mails only to those who absolutely need them.
- ✍ Identify what the message is about with a clear statement on the message line.
- ✍ Begin all messages with a salutation "Dear Jim,"
- ✍ Typing in **ALL CAPS** is like shouting at someone.
- ✍ Avoid trendy acronyms (LOL-laugh out loud) and shorthand styles of writing (u instead of you).
- ✍ Correct spelling, punctuation, and grammar project professionalism.
- ✍ Let people know immediately whether or not they need to take action with your message.
- ✍ Respond to all e-mail messages within 24 to 48 hours. If you are out of the office and unable to reply, set up an auto response that alerts people that you will not be able to respond to them immediately.

Thanks go out to Jim, Ed, Leslie, Stan, Nancy, and yours truly for staffing the AEE booth at the SF Total Buildings and Facilities Expo.



Thanks for listening
John Clark
President, AEE Bay Area Chapter

2002 Board

President – John Clark
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Com. Involvement – Open

Scholarships and Awards – Chris Sweat
(510) 786-5730

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Interested in involvement?

Contact: John Clark
(510) 420-8987

**HAVE YOU RENEWED YOUR
MEMBERSHIP?**

Corporate Sponsors

A special thanks to our Corporate Members. If you were a corporate member, you could have your card advertised (and on the web site too).



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AEE Bay Area Chapter serves as a unique forum for the discussion of energy issues and concerns. AEE Bay Area Chapter provides common professional meeting ground for facility managers, design and specifying engineers, utility and vendor representatives and energy researchers to participate in vigorous peer-to-peer dialogue, learning and group discussion.

AEE Bay Area Chapter strives to provide quality professional development opportunities that build knowledge and skills through meetings, seminars and publications. Emphasis is placed on:

- ? Assessing the applicability of emerging technologies, and
- ? Improving the performance and reliability of current technologies.

Meetings are held on the fourth Tuesday of the month. All interested persons are welcome to attend, participate and join the Chapter. If you are interested in joining the AEE Bay Area Chapter, contact Ryan Wood (800) 770-8539.

Secretary's Report

AEE BAY AREA CHAPTER – 26TH MARCH 2002 MEETING IN SAN FRANCISCO, SINBAD'S RESTAURANT
Topic: Reinventing HVAC Systems for Green Buildings
Presenter: Peter Rumsey, P.E., CEM, Rumsey Engineers

Mr. Rumsey led an interesting and eye-opening discussion on efficient and environmentally friendly HVAC systems design. He used recent design projects as case studies to show the effectiveness of these ideas.

The design goals green buildings are the following:

- ?? Increased energy efficiency
- ?? Higher levels of indoor air quality
- ?? Cost effectiveness
- ?? Building-integrated designs
- ?? Comfort

The solutions are:

- ?? Infinite!

A few of the design ideas that help achieve the increasingly environmentally friendly designs include raised floor air distribution, high efficiency chillers, thermafusers, CO2 sensors, and heat recovery.

Mr. Rumsey suggested the idea of reducing face velocity at coils and forgetting the rule of thumb that traditionally calls for velocities of 500 FPM at heating/cooling coils. A small reduction in face velocity will greatly reduce pressure drop at the coil and the energy consumed by fan motor. Another idea introduced was "Night Sky" – a roof spray system that radiates heat from the building. The design standard of using one distribution pump per chiller was also challenged, the argument being that two pumps can easily be sequenced to operate with three chillers.

Radiant heating systems were discussed at length. Underfloor heating systems can be integrated with other energy efficient ideas, such as high efficiency condensing boilers and "Night Sky" by utilizing the heating system pipes as part of the radiant spray cooling system for the roof.

Some building performance comparisons were made for a case study, which utilized some of the mentioned efficient technologies. For a small increase in cost (\$14 per square foot of construction area compared with a more typical \$12 per square foot), the designers were able to achieve significantly lower energy requirements (40 kBTU per square foot compared with a typical 95 kBTU per square foot for buildings of this class and function).

Important design principles to remember include the following:

- ?? Big pipes – small pumps
- ?? Square law / Cube law
- ?? Thermal integration
- ?? Avoid gross oversizing / rules of thumb
- ?? 'System' and NOT 'Component' approach
- ?? Thoughtful design techniques
- ?? Use metrics for comparisons

Mr. Rumsey applauded mechanical engineers for the work they do and reminded us that because the typical engineer in this field may be responsible for about 36,000 tons of cooling designed over his/her lifetime and 43 MW of power being added to the power grid, utilizing simple energy efficient design techniques can lead to significant improvements in the environment.

Announcement

AEE SCHOLARSHIPS

The awarding of AEE Scholarships has been one of our most successful programs. Since 1983, the AEE Foundation has awarded \$350,000 to outstanding students who attended fully accredited schools on a full time basis and who take energy related courses.

Our chapter is again invited to participate by nominating qualified students. A chapter may nominate one to six candidates (no more than two-post baccalaureate). It is very important that the chapter and student complete the application forms with all the necessary information requested. Application forms can be found on our website, www.aee-sf.org

In addition to the \$500 scholarships awarded by the AEE Foundation, there is the Victor Ottaviano Scholarship. One outstanding nominee will be awarded \$1000 when chosen by the AEE Scholarship Committee for this award. Chapters may indicate which one of their nominees would be best qualified for this award.

Applications must be post marked by **May 1, 2002**.

We hope to make our award selection early enough to help the student plan for his/her fall term. This program is also designed to assist students of AEE members who fulfill the qualifications.

Please send completed forms to:

James P. Waltz
AEE Scholarship Committee Chair
Energy Resource Associates Inc
1626 Holmes Street
Livermore, CA 94550-6010

**Do you know someone who
might be interested in joining
AEE Bay Area Chapter?**

The benefits of joining include:

- ?? Participating in exciting and informative programs
- ?? Receiving a monthly newsletter containing information on meetings, events, and job openings
- ?? Communicating with other energy professionals

For membership application:
Contact Ryan Wood
(650)-596-1160

Meetings are held on the fourth Tuesday of each month. All interested persons are welcome to attend, participate and join.



Bay Area Chapter

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