



ASSOCIATION OF
ENERGY ENGINEERS

Bay Area Chapter

NEWSLETTER

April 2004

Meeting Information Tuesday, April 27, 2004

AEE Bay Area Chapter Presents

"CEC's Public Interest Energy Research"

6:00 – 6:45 p.m.

Social

6:45 – 7:30 p.m.

Dinner

7:30 – 7:40 p.m.

Chapter Business

7:40 – 8:30 p.m.

Presentation

Location:

Café Rustica

Cost:

\$25 Members

\$30 Non-Members

\$15 Students

Reservations:

Reservations can be made on our chapter website at www.aee-sf.org, by e-mail to luther@energy-solution.com, by fax at (510) 482-4421 using the handy FAX form, or by phone at (510) 482-4420 ext 230.

President's Message

This spring California (and Las Vegas) is once again busting out in a big way. And not just with wild flowers. To continue the alliteration, blackouts at the Bellagio, billions in refunds, and the end of a bankruptcy are topics in the news.

California's attorney general is still slogging away at his attempt to retrieve \$9 billion in refunds for overcharges during the 2000-2001 energy crisis.

President's Message Cont.

Whereas the Federal Energy Regulatory Commission (FERC) sees that the state is due about \$3 billion, it appears that the Feds have done everything "within its legal authority to rectify the unjust and unreasonable prices." However, this generally implies that CA needs to, essentially, sleep in the bed that they/we made. Question: Who makes the bed now or in the future?

And the grand dame of IOUs emerged from bankruptcy this week. The 99-year-old Pacific Gas and Electric Co. ended three years of toil and trouble after distributing \$10.2 billion to hundreds of creditors owed since the bankruptcy on April 6, 2001. The rehabilitation is expected to cost PG&E's 4.8 million electricity customers \$6.2 billion to \$8.2 billion in above-market prices through 2012. That works out to an average of \$1,300 to \$1,700 per customer.

While it is generally good news the utility has been made whole, energy experts continue to worry about the state's supplies and market controls. The warnings have begun that we could very well encounter rolling blackouts this summer. And, ironically, there is an estimated 1000 MW less of available supply compared to last year due to the retirement of old power plants. So, we are certainly not out of the woods yet.

The California Energy Commission is working on various pathways and strategies to guide us out of the energy crisis wilderness. And we have just the person to tell us more on this front coming to this month's meeting. Check out the April meeting announcement to read more on Don Aumann's presentation of the PIER program. And by all means join us on Tuesday, April 27 on College Avenue in Oakland.

One last note: As of publication, they still didn't have a cause for the failure of the "electrical component" at the Bellagio. I'm waiting for the news item that links the blackout to an "Italian Job"-like heist. Maybe there's a robinhood who can anonymously help pay off the energy market debacle?

Bruce
Bruce Chamberlain
bruce@energy-solution.com

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Renewal Notice

AEE Bay Area Chapter membership renewals were due March 31, 2004. Renew now to continue receiving your AEE Newsletter!

See chapter website for details (www.aee-sf.org)

Secretary's Report

**AEE Dinner Meeting, March 23rd, 2004
Café Rustica, Oakland**

Panel Discussion - Four Perspectives on the Advancements and Limitations of Energy Management Systems

This month four very experienced controls experts related their thoughts in a question and answer session on Energy Management Systems (EMS). Panel members included:

John Clark – John is President of Conseil Engineering in Oakland. They integrate and deliver Open Systems using Echelon's LonWorks technology. He is a past president of the Bay Area Chapter and currently serves as this year's co-secretary.

Bob Levi – Bob is a sales engineer for Air Systems, representing the HVAC contractor perspective from the BACnet side of the industry.

Nicolina Guiliano – Also a sales engineer, Nicolina works on the construction side of Johnson Controls. She calls on Building Owners, Engineers and Contractors often integrating HVAC Controls, Lighting Controls, Fire and Security Systems.

Rick Casse – Rick is the Engineering Manager for Corporate Facilities at Gap Inc. in San Francisco. As an end user of EMS, Rick has a vast amount of experience testing, starting, commissioning and operating commercial facilities via EMS.

Question: *What do you think about advancements in technology, energy management techniques & maintainability of EMS?*
The general consensus is that EMS is evolving toward Information Technology with many more systems to integrate now. There is tremendous value in EMS being web-based so that monitoring, control and troubleshooting can be performed from just about anywhere.

The EMS should be part of the building infrastructure. However, it can be very challenging to get the building owner's IT people to "buy into" connecting the EMS to a building network. Similarly, Fire Life Safety and Security should be integrated into IT framework. The capabilities of EMS are just beginning with regards to integrating HVAC systems with security, lighting and other building needs.

Question: *Describe EMS capabilities and values as a tool for predictive vs. preventative maintenance.*

This seems to be largely driven by the environment the EMS is serving. Critical facilities that have very important processes will use the EMS primarily as a predictive tool. Less critical facilities (most EMS applications) will employ the EMS more for alarm management as maintenance needs arise.

Question: *What role does the EMS have in commissioning?*

EMS is a tremendous tool when it comes to commissioning building systems. However, many (most?) HVAC systems are tested but not commissioned, which can present significant hidden operating costs. Commissioning is often overlooked and needs to be presented to owner as valuable both in terms of comfort levels and operational savings. It is difficult to quantify operating costs associated with systems that have not been commissioned. Sometimes energy costs can be reduced as much as 30% with attentive commissioning and ongoing tuning efforts. Commissioning is required for fire alarm testing.

Question: *What do you think of the interoperability of the different protocols in the market today?*

There are two major open protocols with no other new ones on the horizon. Both of these platforms have good things to offer and the decision as to which one should be applied in a particular case should be based on the one that fits best. Thankfully, the EMS realm is not fraught with an abundance of platforms like the industrial sector, which has 10-12 open protocols.

There are several proprietary protocols, but it seems that building owner's don't really care which protocol they get; they just want information and control. Also, with enough bandwidth and memory, protocols become irrelevant. The "gotcha" is that proprietary protocols may require proprietary workstations and/or software.

The topic was then turned over to the floor for discussion, which revealed a couple of parting thoughts:

- Many people don't know how to use their EMS... are they too complex?
- Software and programming is very difficult. Qualified operator's and quality programming is hard to find – operators may not care, are overwhelmed, or have inadequate training. Problems often stem from programmers or operators not knowing the design intent. It was suggested that the EMS graphics package should either include or have a link to the sequence of operation the EMS is executing.
- Also, the controls industry is very cyclic and it is notorious for obsolescence.



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 typically 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, you can contact Stan Boghosian at (510) 845-7468, or you can directly download a mail-in membership application from the AEE website at: <http://www.aee-sf.org/form.rtf> or <http://www.aee-sf.org/form.doc>

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:
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