



**ASSOCIATION OF
ENERGY ENGINEERS**

Bay Area Chapter

NEWSLETTER

February 2000

Meeting Information Tuesday, February 22nd

Tour of Delta Star Factory. Ever wonder what it takes to manufacture that big oil-cooled transformer assembly rolling down the highway on a tractor trailer? Here's your chance to get the insider's view of what it takes by joining us on a tour of the factory. Delta Star, Inc. manufactures electrical equipment used in the generation, transmission, and distribution of electrical energy. They make transformers up to 230KV in both single and three phase ratings, through 35,000 KVA. In addition to permanent transformers and switchgear, Delta Star constructs complete mobile substations.

Time:
6:00 Tour of Delta Star Factory

Location: Delta Star Factory

Dinner: Iron Gate Restaurant

Cost: \$30.00 Members
\$35.00 Non-Members
\$20.00 Students

Reservations:

Call John Clark at (510) 420-8987 or FAX (510) 420-1404 using the handy FAX form. Make your reservations by noon Friday, February 18. You can also respond by e-mail to webmaster@aee-sf.org or at the chapter website www.aee-sf.org

PRESIDENT'S MESSAGE

by Leslie Kramer

I just returned from a two-week trip to Bulgaria, where I was working on a feasibility study for a landfill gas-to-energy plant. For the first time, I got to experience what it's like being an international energy consultant. What amazed me most was being able to work with Bulgarian colleagues in the new universal languages: Windows 97, MS Excel and MS Word (not to mention English, which almost everyone speaks).

I also had a chance to see market transformation in a whole new light. Bulgaria, as a "recovering" communist state, has market barriers that make our market barriers look puny, covering an array of social, political, institutional and economic factors. Perhaps most striking is the shortage of investment capital, in part due to IMF restrictions on public-sector borrowing. At the same time, the potential for energy savings in Bulgaria is large. For example, in the residential sector, most (maybe 80 percent) of the population live in Soviet-era concrete high rise apartment buildings, with heat provided by centralized municipal heating plants. The apartment buildings are poorly insulated, most radiators have no control valves or thermostats, and most of the central plants are aging and inefficient. In the industrial sector, Bulgarian factories have energy intensities five to ten times greater than their Western European equivalents.

Despite high unemployment, low wages, government corruption, pollution, and other common ailments of former Soviet-block countries, most of the Bulgarians I encountered were remarkably optimistic and bullish on Bulgaria. Energy professionals in the government and in non-governmental organizations are working vigorously to catch up with Western Europe and the United States. Considerable strides have already been made, including, new energy regulations, the creation of a state energy-efficiency agency, and the establishment of energy-efficiency demonstration zones in six cities. And I learned that, at least among energy types, Amory Lovins is as universal as Bill Gates.

Continued ®

See inside for more info...

2000 Board

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AEE Advertisement Cost

Charges for advertising in the Newsletter and Web Site are as follows:

<u>Advertisement Size</u>	<u>(1) one month</u>	<u>(3) three months</u>
Quarter Page	\$50	\$40/month
Eighth Page	\$30	\$20/month
Business Card	Not Available	\$15/month

- Advertisement in both documents will be at an additional charge of 50% to the above.
- Corporate members are permitted to advertise their business card at no charge, otherwise Corporate members will be charged at half of the above cost.

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

 NO RESCO Your energy solutions partner. NO RESCO 100 Produce Avenue, Suite L So. San Francisco, CA 94080 888-667-3726 www.noresco.com	 Newcomb Anderson Associates 755 Sansome St., Suite 500 San Francisco, CA 94111 www.newcombanderson.com
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Editors Corner

As a matter of fact:

Amount American Airlines saved in 1987 by eliminating one olive from each salad served first class: \$40,000.

Every day more money is printed for Monopoly than the US Treasury.

It is possible to lead a cow upstairs but not downstairs.

Average number of people airborne over the US any given hour: 61,000.



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 which 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

Meeting Minutes

January 25th, 2000

AEE Dinner Meeting, January 25th
at Zza's Trattoria, Oakland

The First Year of the Standard Performance Contract Program; Theory and Practice. About 25 energy experts gathered to enjoy wine, smoked chicken, spaghetti salciccia, pizza al funghi and good company.

Mike Rufo, of Xenergy fame, presented a first hand account of Xenergy's "Baseline Assessment of Non-Residential Energy-Efficiency Services" and "Evaluation of the 1998 CA Non-Residential Standard Performance Contracting (SPC) Program: Application of Theory-Driven Approach".

Mike prefaced his presentation with an explanation of the differences between current and past goals of evaluation efforts. While, in the past, Xenergy's efforts (sampling objective) would have focused on "resource kwh saved, the current emphasis is on Market Transformation or intervention efforts that sustain themselves once the program is complete.

Baseline Assessment. The objectives for the 1998 program were to 1) Develop a baseline for evaluating CA's Non-residential Standard Performance Contracting Program (NSPC); 2) Characterize current market for energy-efficiency services; 3) Develop market indicators via program theory; and 4) Measure market indicators.

Xenergy's approach was to conduct 500 California and 500 non-California telephone surveys. There were 6 segments including Office, Retail, Institutional, Commercial Other, High Intensity Industrial, and Low Intensity Industrial. The size strata were made up of 4 categories – Small < 20 kW, Medium 20 to 250 kW, Large 250 kW to 2,000 kW, and Very Large > 2,000 kW. (These were based on Dunn and Bradstreet samples.)

Conclusions from this baseline assessment were:

- ◆ The size of the California (CA) performance contracting market is \$50-\$100 million per year (total cost, paid out over period) including both guaranteed and shared savings projects. The national market is somewhat less than 10 times the California figure.
- ◆ Participants in NSPC are identical to largest customers in baseline assessment.
- ◆ There are enormous differences in non-residential energy-efficiency (EE) markets by size and segment, i.e., the largest customers are very sophisticated with respect to EE.
- ◆ CA and national markets are now similar.
- ◆ Direct access has not led to successful bundling of EE.
- ◆ Customers still turn first to regulated utilities for EE, i.e., traditional ESCOs are perceived as less credible.
- ◆ A more detailed baseline is critical to assessing Market Transformation objectives.

Evaluation of 1998 CA Non-Residential SPC Program. As of October 1998, 92 customers had applied for \$33.8 million worth of incentives. One of the near-term effects of this program was that some EE Service Providers (EESP) reported changes in the market but do not associate them with NSPC. Due to the limitations and future research needs, it is apparent that there needs to be more data to better assess the market affects of the SPC program. In this first year of the program, the study estimated a 10% growth effect on performance contracting and 231 GWh of expected savings as of Fall 1998.

The Q&A that followed Mike's informative presentation turned out to be a lively extension of the discussion to include the 1999 and 2000 programs. (In 1999, there was \$80 million available in the SPC Program. The 2000 program is underway with similar funding and incentives to 1999.) Unfortunately, the restaurant owner wasn't as keen on the subject as the rest of us and reminded us that we had stayed longer than expected—yet another example of the involved and interested members that gather for our monthly AEE musings.

by Bruce Chamberlain

Career Opportunities

KW Energy Engineering

KW Energy Engineering is seeking an entry to mid-level engineer to join our team. We are seeking a self-motivated person willing to accept responsibility for a wide range of projects. Learn from an experienced staff committed to saving energy in buildings and industrial processes. We offer flexible work hours, hands-on experience, and a creative, casual work environment. Excellent opportunity to obtain PE or EIT. DOE-2, Market Manager, Metrix, or M&V experience a plus. Our clients range from the largest ESCOs to local facilities in need of technical support for energy efficiency projects. For more information about us, see our website at www.kw-energy.com. Reply with résumé to info@kw-energy.com.

Supersymmetry

Supersymmetry is a "green" engineering firm, specializing in energyefficient HVAC systems for the high tech industry. We work primarily on cleanroom and commercial building HVAC systems. Our clients include Netscape, STMicroelectronics, AMD, Hyatt Hotels, Lawrence Berkeley Labs, Applied Materials and Zilog Semiconductors. We are seeking a full-time engineer to work on energy monitoring, HVAC design, and energy efficiency projects for high tech companies in Silicon Valley and around the U.S. An engineering degree and experience designing HVAC systems are required. Experience with energy efficiency is highly desirable. Applicants must be eager to work in a small, informal office with other dedicated and environmentally-minded engineers.

Have You Renewed Your Membership Yet

Corporate members receive recognition in the newsletter and the chapter website www.aee-sf.org.

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
(800) 770-8539

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Bay Area Chapter

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