



ASSOCIATION OF
ENERGY ENGINEERS

Bay Area Chapter

NEWSLETTER

November 2002

Meeting Information Tuesday, November 26, 2002

AEE Bay Area Chapter Presents

“Brewery Tour and Award Dinner” Pyramid Alehouse, Berkeley

6:00 – 6:30 p.m.
Social

6:30 – 7:15 p.m.
Tour of Brewery

7:15 – 9:00 p.m.
Dinner and Chapter Awards

Location:
Pyramid Alehouse

Cost:
\$30 Members
\$35 Non-Members
\$15 Students

Reservations:
Call Bruce Chamberlain at (510) 482-4420 ext 227
FAX (510) 482-4421
chapter website www.aee-sf.org
or by e-mail bruce@energy-solution.com
See insert for more information.

President’s Message

Here's a tidbit of information that could be a preview of things to come. The number of shelved and canceled generation projects is on the rise, according to data from the Platts NEWGen database, Boulder, Colorado. Projects comprising more than 89,000MW were shelved or canceled from January through July of this year. In 2001, developers tabled or canceled more than 60,000MW of capacity, which is twice as much as in 2000.

President’s Message Cont.

Ever wondered how much energy goes into making microchips? Checkout the following article from the Nature Science Update website (<http://www.nature.com/nsu/021028/021028-12.html>). The author offers an interesting off the cuff analysis of microchip production from cradle to grave.

Don't miss the next chapter meeting. You could be a winner! We'll be presenting chapter awards to those folks who have made a mark in the Bay Area energy scene over the last year. See you there.

Thanks for listening



John Clark
President, AEE Bay Area Chapter

Announcement

The City of Oakland has launched “The Oakland Energy Partnership”. The Partnership's energy efficient design assistance (EEDA) program uses energy experts to provide free customized energy efficiency design assistance to property owners, developers, and designers involved with new construction or retrofit of existing buildings.

The Partnership also includes *The Large Commercial Building Tune Up Program* that targets medium and large-sized multi-tenant commercial buildings, medical facilities, hotels, and educational buildings in Oakland. This program offers, at no cost to the participant, engineering services to evaluate the performance of the building's existing systems, recommendations for measures that improve performance, and rebates to the participant to implement those measures. These free services are available through December 2003.

To learn more about the EEDA Program, please call Energy Solutions at (510) 482-4420 ext. 220. For assistance or questions regarding the Large Commercial Building Tune Up Program, please contact Quantum Consulting at 510-981-2010.

2002 Board

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Interested in involvement?
Contact: John Clark
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Secretary's Report

AEE BAY AREA CHAPTER – October 22nd 2002 Meeting
Tour of Calpine's Delta Energy Center
Location: Pittsburg, CA

The October 22 meeting featured a tour of Calpine's new 880-Megawatt Delta Energy Center in Pittsburg, CA. Delta operates as a combined-cycle natural gas fueled project. Three combustion gas turbines generate power from natural gas; three heat recovery steam generators turn the exhaust from that power into steam, and a steam turbine converts that steam into more power. Reflective of the technical advances in equipment and emissions controls that have occurred over that past several decades, Delta is 60-90 percent cleaner and 40 percent more efficient than the comparable power plants that are currently in operation.

The construction project was managed by Bechtel; Calpine oversees operations and maintenance of the facility. Calpine also owns and operates a 70-megawatt energy center located at nearby Dow Chemical, which supplies Dow with all its energy requirements. Calpine has another facility in Pittsburg; a 550-Megawatt Los Medanos Energy Center, which began commercial operations in July 2001.

Project Facts:

Owner:	Calpine Corporation, San Jose, CA
Contractor:	Bechtel Power Corporation
Project Capital Cost:	\$450 Million
Size:	880 MW nominal
Technology:	Natural Gas-fired combined-cycle cogeneration
Combustion Turbines:	Siemens Westinghouse 200 MW nominal each, Gas-fired.
HRSGs:	Deltak, Natural Circulation, Triple Pressure, SCR to 2.5 ppm NOx at stack.
Steam Turbine:	Toshiba, 300MW nominal, Triple Pressure
Cooling Tower:	Mechanical Draft, 12 cells, Wooden Construction with Dual Speed Fans
Transmission:	230 kV, 3.3 mile (including underground portion) to PG&E substation
Water Supply:	Cooling Tower uses treated waste water from Delta Diablo Sanitation District; Process Makeup uses potable water from Contra Costa County Water District

The tour included the facility control room, which includes multiple control monitoring stations and allows for a quick overview of the plant performance, parasitic loads, as well as much more detailed information about each piece of equipment's real-time performance. Due to the sophistication of the controls and the fact that equipment maintenance needs are outsourced, only three employees are needed at any one time to operate the facility.

Raj Daswani, PE
Co-Secretary, AEE Bay Area Chapter

Announcement



CPUC selects SBW Consulting, Inc. to offer compressed air incentive program

The California Public Utilities Commission (CPUC) has announced the selection of SBW Consulting, Inc. (SBW) to offer an exceptional industrial energy efficiency program designed to reduce the cost of operating compressed air systems. The Compressed Air Management Program (CAMP), developed by SBW ((425) 827-0330) and funded through the CPUC, is offering no-cost compressed air system assessments and up to \$0.04/kWh incentive for the first year's electrical savings.

The CAMP incentives are available for qualifying compressed air system improvements, and for 3-year maintenance programs, to qualified customers in the PG&E service territory. The incentive payments are made in two parts; the initial \$0.02/kWh for the cost of system improvement and the second \$0.02/kWh for the three-year maintenance program. The incentive payment for a maintenance program is an innovative and valuable feature of CAMP.

The no-cost assessment of the customer's system by SBW's engineers includes inspection, power and pressure data collection, computer modeling of the system and analysis of the data, recommendations for improvements, technical support while the improvements are being made, and measurement of the savings to determine the incentive amount.

This means a qualifying project for an approved customer that saved 500,000 kWh the first year could receive an incentive payment of up to \$10,000 toward 60% of the improvement cost, and an additional \$10,000 toward the entire cost of a qualifying 3-year maintenance program. This is in addition to the on-going cost savings of \$50,000/year that this customer would get from reduced electricity cost, assuming a cost of \$0.10/kWh.



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 Leslie Kramer, 415-434-0900 ext 146.

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 Leslie Kramer
(415) 434-0900 ext. 146

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65 Battery Street, Suite 200
San Francisco, CA 94111