

# Sol Air

Newsletter of the Southern California Chapter: American Society of Heating, Refrigerating and Air Conditioning Engineers, Inc.  
March 2003 website: [www.ashrae-socal.org](http://www.ashrae-socal.org) Vol. 48, No. 7

## APRIL 1, 2003 MEETING INFO: ASHRAE RESEARCH PROMOTION

Les Freres TAIX

1911 Sunset Blvd., Los Angeles, California

**5:30 Cooling Tower Design 101**  
**Speaker: Mr. Jerry Conklin**

**6:05 Social Hour (Fun Time!)**

**6:45 Dinner**

\$25 with reservation

\$30 without reservation

\$10 student member

**7:45 Main Program: Electric Industry In California Present and Future**  
**Speaker: Mr. Kevin Payne, SCE**

**9:00 Meeting Ends**

Reservations: Dale Au or Brenda Montmarquet (626) 961-9640, Fax (626) 961-9041 by Mon., March 31, 2003.

SCE, will speak on recent changes in the electric industry. His talk will focus on regulatory and legislative decisions that have and will spur rate changes affecting all users of electricity in California. Kevin graduated from the University of California, Berkeley in Mechanical Engineering. He has worked for Southern California Edison for a number of years. His current position includes directing a team of highly trained and experienced technical professionals to solve a myriad of issues and challenges facing Edison and some of its largest customers. Kevin's department provides assistance to account representatives and major customers through specialized energy expertise, analysis of technologies and applications, evaluation of alternate energy supply scenarios, project management, and delivery of state-sponsored energy efficiency programs.

## APRIL TECHNICAL MEETING: COOLING TOWER DESIGN 101

*Speaker: Mr. Jerry Conklin*

Mr. Jerry Conklin will discuss the design of, and application strategies for evaporative cooling equipment such as cooling towers and fluid coolers. He will also update the crowd on recent developments with Title 24, and the application of cooling towers.

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## APRIL MAIN PROGRAM: ELECTRIC INDUSTRY IN CALIFORNIA PRESENT AND FUTURE

*by: Ishtiaq Chisti*

Kevin Payne, Director of Technical Support, Major Customer Division, Customer Service Business Unit,



## From the President's Desk

*Ralph Panting, President,  
Southern California Chapter,  
ASHRAE*

### THE SOLAR DECATHLON

The U.S. Department of Energy's new student competition to design and operate the most attractive and effective solar-powered house was held September 26 through October 6, 2002. The Solar Decathlon was held on the National Mall in Washington, D.C., where 14 student teams from various universities across the United States competed to capture, convert, store, and use enough solar energy to power our modern lifestyle. The students erected their home design entries on the Mall during afore mentioned dates. Each entry was judged on Design & Livability, Design Presentation & Simulation, Graphics & Communication, The Comfort Zone & Refrigeration, Hot Water & Energy Balance, Lighting & Home Business Capability, and finally Getting Around in the home. The University of Colorado at Boulder took first place, second place went to the University of Virginia, and Auburn University received third place. The information above was forwarded to me by Joanie Waits, our ASHRAE Education Coordinator and Ruby Nahan, Office of Communications National Renewable Energy Laboratory.

The U.S. Department of Energy will hold another competition in 2005 held in the National Mall, Washington, D.C. This is an international competition open exclusively to colleges, universities, and other post-secondary educational institutions. Those institution interested in competing in 2005 should review the request for Proposals at <http://www.nrel.gov/contests/solicitations.html> and submit a proposal by April 30, 2003.

Let us not forget our troops in Iraq fighting to keep us free and safe at home. May they complete their mission safely and return home soon.

See you at our April 1<sup>st</sup> meeting.

## MARCH MAIN MEETING RECAP: GEOEXCHANGE FOR BUILDINGS

by: Bob Woods



Mr. Fisher presented a very informative topic on Geoexchange. Since ground temperatures tend to fluctuate far less radically than air above the earth, the earth can be used as a thermal heat trap by pumping water, coolant or refrigerant through a pipe loop in a building that absorbs therms and then expels them into the ground. Geothermal loops may pass vertically or horizontally into the earth.

Cooling tower systems can benefit greatly from Geoexchange by using the earth to pre-cool the water prior to going into the towers. 2500 square foot land is required per ton of cooling and ground loop systems can be cost effective when land is plentiful.

The loop piping is typically high density polyethylene. Pipe joints are made by heat fusion (not glue). Thermal conductivity of the soil must be considered when utilizing this technology since not all soil captures and transfers heat identically. An inert thermal grout is used around the piping to enhance the thermal conductivity.

Geoexchange has been used in many places in California, particularly North California. The topic was educational and well presented.

## MARCH TECH FORUM: BOILER AIR QUALITY ISSUES

by: Greg Danenhauer of Parker Boiler

There are many air management districts in the state of California. The LA Basin is under the auspices of The South Coast Air Quality Management District (AQMD). AQMD has been out of spec with the Federal Government's EPA. In response, AQMD has taken a position of lowering the emission of Oxides of Nitrogen which have been shown to be a precursor to ozone. AQMD has no authority over automobile emissions, just stationary sources like boilers and water heaters. The rulings that most affect our industry are the ones controlling equipment with inputs of 75,000 BTU/hr and above.

Rule 219 required the permitting of new and existing boilers.

Rule 1146 was a retrofit rule for compliance of boilers less than or equal to 5 million BTU/hr.

Rule 1146.1 controlled boilers 2 million to 5 million BTU/hr with a maximum NOx output of 12 parts per million or less, and be source tested with annual permitting.

Rule 1146.2 regulates new and used appliances 75,000 to 2 million BTU/hr.

A Combustion Analysis Report Summary will yield an accurate assessment of the products of combustion. Greg's talk was very informative.

## INSTALLATION DINNER 2003

The Installation Dinner will be at the Grand Galley and Catering in Long Beach just west of the intersection of Lakewood and Willow on Willow (old Elk's Lodge). Saturday evening, June 14th, beginning at 6:00 PM, Dinner at 7:30, and a Comedy Show to follow dinner. Maximum capacity is for 100 people. Cost to be determined.

## ASHRAE RESEARCH PROMOTION CAMPAIGN

By Carmen Urenda, PE

By now, most of you have received a letter asking for contributions for ASHRAE Research. Hopefully, you have made your donation or have saved the letter and are planning to donate. While you are thinking about how much you would like to give, let me throw a few statistics at you. Last year, ASHRAE nationwide raised approximately \$1.7 million for research and Southern California ASHRAE's contribution was \$13,075. Since the start of the current campaign in August of 2002, our chapter has raised \$4,985. While this may not sound like much, we are actually ahead of where we were last year at this time and I am told that more donations are arriving daily. Our goal is to surpass last year's campaign and we still have four months to go. Your donation will help us both locally as a chapter and nationwide in the efforts to promote the research of new issues and technologies.

We are proud to recognize the following chapter members who have recently contributed to Research Promotion. Without the backing of these generous individuals and companies, achieving our research goals would not be possible.

Barney Klinger

Hugh A. McTernan

Apex Engineering, Inc.

Innovative Engineering Group

Thermal Comfort Systems, Inc.



# Southern California Chapter Spring Golf Tournament

## Ocean Trails Golf Course

### Rancho Palos Verdes



**GOLF TOURNAMENT**  
**WEDNESDAY**  
**MAY 14, 2003**

**4 Man Scramble**  
**Sign in at 10:00 a.m.**  
**Shotgun start at 11:00 a.m.**  
**Banquet & Dinner to follow**  
**Limited to 144 golfers**  
**Fee: \$200 per player**

**Awards:**  
**Golf Awards, Door Prizes, & Raffles**

Name \_\_\_\_\_ Company \_\_\_\_\_

- 1. \_\_\_\_\_
- 2. \_\_\_\_\_
- 3. \_\_\_\_\_
- 4. \_\_\_\_\_



**Group Contact Name:** \_\_\_\_\_

**Phone:** \_\_\_\_\_

**Corporate Hole Sponsorships Available For \$225**

**Golf Chairman: Chad Herrick**  
**Phone: (562) 944-6341**  
**Fax: (562) 944-7092**  
**Email: [cherrick@westernallied.com](mailto:cherrick@westernallied.com)**

**To Register: Please send registration fee and contact information to golf chair by 08, May 2003.**



## Southern California Chapter Spring Seminar

### A Review of Hydronic System Design

Come dialogue about water!  
Provide feedback on what you're looking for from your ASHRAE TC's!

#### Morning Session:

The Basics: Hydronic System Design

The morning session will cover general hydronic system design, and is geared towards entry or mid-level practitioners who want to learn more about;

Pumps	Pipe Selection
System Styles	Air Control

The class will be geared towards the practical application of the closed loop HVAC piping system, but is based on understanding the fundamentals of hydronic systems.

#### Afternoon Session:

The Not So Basics:

The afternoon session will build on the morning session and cover aspects of hydronics geared towards all levels of those practicing in the field. Specific topics to be addressed include;

Flow Control	Variable Speed Variable Flow Systems
Compound Pumping Systems	Balancing
Simplified Analysis of Flow	And More... (If We Have Time!)

#### Course Leader:

Mark Hegberg, Hydronics Instructor ITT Bell & Gossett "Little Red Schoolhouse". Mr. Hegberg is a long time ASHRAE volunteer who has served at the Chapter level through the chairs of the Illinois Chapter and also at the Society level where he is a member of several technical and standing committees. He is past Chair of TC 9.7 Test & Balance, and current Chair of TC 6.1 Hydronic & Steam System Design. He is also the incoming Vice-Chair of Technical Activities Committee and Chairs the Handbook Content Sub-Committee.

The "Little Red Schoolhouse" is an accredited ICEAT course developer; CEU's are available for this class. A text manual will be provided.

**Date:** Thursday, 15 May 2003

**Seminar Chair:**

Chad Herrick

**Time:** 8:00 am to 4:00 pm (lunch is included)

Western Allied

**Location:** Radisson Hotel  
6161 Centinela Avenue  
Culver City (562) 944-6341

12046 E. Florence Avenue  
Santa Fe Springs, CA 90670  
cherrick@westernallied.com

**Registration Fee:** \$125

**To Register:** Please send registration fee and contact information to the seminar chair, by 08, May 2003.

Name: \_\_\_\_\_

Company: \_\_\_\_\_

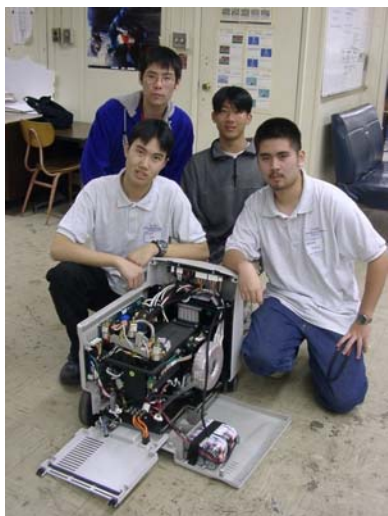
Phone: \_\_\_\_\_

Email: \_\_\_\_\_

## LOS ALTOS ENGINEERING ACADEMY

by Ishtiaq Chisti

Anna is a former student of the Academy and is a tireless champion of the fuel cell car research cause. Bob is the teacher/advisor of the program and works with the students, area firms and universities to someday make the dream fuel cell automobile ply the roads of Southern California and elsewhere.



Students with Fuel Cell 2



Clay Lampman, Bob Franz and Ana Wu



The Los Altos High Student Team

## SOUTHERN CALIFORNIA CHAPTER PROGRAM SCHEDULE

### April 1, 2003

Main Program: IAQ-Tech 62  
 Speaker: Vicken Arabien  
 Tech Forum: Modular Cooling Towers  
 Speaker: TBD

### May 6, 2003

Main Program: Acoustics  
 Speaker: Mark Schaefer  
 Tech Forum: VAV Turndown  
 Speaker: TBD

### June 2003

Installation Dinner/Dance

### Western Section Programs

- ❖ April 8, 2003 (Santa Barbara)
- ❖ May 13, 2003 (Ventura)
- ❖ June 10, 2003 (Santa Barbara)

## HELP WANTED

Anybody wishing to place an ad in this column for an engineering or other position, please submit your request to:

JOEY JIRON  
 1040 Lincoln Ave., Ste. 210,  
 Pasadena, CA 91103  
 (626) 449-4188, x207  
 Fax: (626) 449-4122  
 jjiron@budlong.com

Please make a donation of \$50 per ad made payable to: ASHRAE Southern California Chapter.

## POSITION SOUGHT ENGINEER

I would like to offer my 5 years of HVAC control Design and Project Engineering experience to HVAC industry in Southern California. If you think such an engineer could be a valuable addition to your team, please communicate with me (Sophia) via phone at 415-517-3178 or e-mail at sophia\_jovan@yahoo.com.



A Sempra Energy company

## SENIOR ACCOUNT EXECUTIVES

The Southern California Gas Company is seeking skilled technical sales professionals to identify the market potential of and increase market share for emerging gas technologies among new and existing commercial/industrial customers. You'll be involved in daily customer contact within the Design Community and will also serve as a technical expert within our organization. Additionally, you will prepare sales proposals and

present technical energy solutions that will enhance our customers' natural gas usage.

The ideal candidates will possess a BS degree in Engineering and 3-5 years proven experience in sales and/or technical support. Additionally, our prime candidates will have high personal initiative, strong interpersonal, analytical and math skills, as well as good time management, organizational and communications abilities. A valid driver's license is required. An understanding of commercial/industrial equipment and processes particularly in the areas of HVAC, refrigeration or power generation is an advantage.

Southern California Gas Company is the nation's largest natural gas utility, serving more than 18 million people through 5 million meters. The company's Service Territory encompasses more than 23,000 square miles throughout central and Southern California. SoCalGas is a subsidiary of Sempra Energy (NYSE: SRE).

For additional information, check out the job description on Monster.com. Search SoCalGas and look under "Sr. Account Executive". You may also call Bertha Chavez (SoCalGas Staffing Coordinator) 213-244-3235.

We are proud to be an Equal Opportunity Employer.

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## MARCH MEETING HIGHLIGHTS



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## Newsletter of the Southern California Chapter

American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.

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