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## Helping Your Business Save Energy

### Discover the economic and environmental benefits of energy efficiency.



A Sempra Energy utility®

# ENERGY RESOURCE CENTER

Energy Efficiency and Sustainable Seminars for Commercial and Industrial Businesses

The Gas Company's Energy Resource Center  
9240 Firestone Blvd.  
Downey, California 90241-5388

### ADDRESS SERVICE REQUESTED

## Seminar Schedule: Third Quarter 2009

### If you have energy-efficiency challenges, we have solutions!

Discover the wealth of benefits that energy efficiency can offer your organization. Stay up-to-date on the latest energy efficiency cost-saving opportunities, technologies and certification programs. Take advantage of the education and training offered by The Gas Company<sup>SM</sup> at its Energy Resource Center, a LEED<sup>®</sup>-certified facility and showcase for energy-efficient technologies, sustainable building practices and more. Check out these valuable classes we're offering this quarter, which are part of our commitment to helping you manage your energy use to save money and energy.

Except where otherwise noted, all seminars are held at The Gas Company's Energy Resource Center, 9240 Firestone Blvd., Downey, CA 90241.



Go Green. Save Green.

## HVAC



These seminars are specifically tailored to the unique needs of the HVAC industry and are co-sponsored by The Institute of Heating and Air Conditioning Industries, Inc. (IHACI)

### Quality Installation, Quality Maintenance and Quality Service in the California HVAC Market (CAQI/CAQM/CAQS)

Time: 6:00 p.m. - 9:00 p.m. (5:30 p.m. check-in and dinner)  
Cost: Free (Attendees must register for each seminar individually.)

The Gas Company and IHACI are proud to continue presenting the new set of courses focusing on quality installation, maintenance, and service of HVAC systems in California. Each series of courses focuses on a particular HVAC appliance and covers all areas required to properly design, install, commission, maintain, service, diagnose, and verify proper operation. These courses help provide participants with the skill sets and tools to ensure that the systems they work on are safe, reliable, and operating as efficiently as possible.

### System Performance Module

Location: **The Gas Company's Energy Resource Center  
9240 Firestone Blvd., Downey, CA 90241**

This two-part seminar starts with the fundamentals and theory behind residential and light commercial HVAC system performance with an overview of Quality Design (QD), Quality Installation (QI), Quality Maintenance (QM) and Quality Service (QS) as applied in the California market (CAQD/CAQI/CAQM/CAQS). It also introduces and details the "whole house" concept, outlines the instruments and field techniques required to measure HVAC system performance, and discusses how to "problem solve" any issues discovered. This seminar helps give its participants the complete skill sets required to understand and evaluate the whole HVAC system and provide the client with an HVAC system that will be safe, reliable and operating at the highest capacity and energy efficiency possible.

**System Performance Module Part 1:**  
Wednesday, September 9 (Seminar #20294)  
**System Performance Module Part 2:**  
Thursday, September 10 (Seminar #20295)

### AC and Heat Pump Module

Location: **The Gas Company - Chatsworth Office  
9400 Oakdale Ave., Chatsworth, CA 91311**

This four-part series starts with the fundamentals and theory behind basic air conditioning and heat pump systems, and systematically moves through the process involved in the quality installation (QI), quality maintenance (QM), and quality service (QS) of air conditioning and heat pump systems as they apply to the California HVAC/R market.

Seminar participants will be taken through a comprehensive survey of all areas required to properly design, install, commission, maintain, service, diagnose, and verify that the air conditioning and heat pump systems they are working on are operating as efficiently as possible. Participants will be given the skill sets and tools required to assess if the HVAC systems they work on are safe, reliable and operating at the highest capacity and energy efficiency possible.

**AC and Heat Pump Module Part 1:**  
Tuesday, September 22 (Seminar #20296)  
**AC and Heat Pump Module Part 2:**  
Wednesday, September 23 (Seminar #20297)  
**AC and Heat Pump Module Part 3:**  
Tuesday, September 29 (Seminar #20298)  
**AC and Heat Pump Module Part 4:**  
Wednesday, September 30 (Seminar #20299)

### REGISTRATION IS EASY:

For seminar details, more information about the ERC and its location, or to register for seminars, call 1-800-427-6584 and select option one, fax us at 1-562-803-7551 or call the Energy Resource Center direct at 1-562-803-7500. Please be prepared to supply the seminar number. Also, visit our web site at [seminars.socalgas.com](http://seminars.socalgas.com) or e-mail us at [erc@socalgas.com](mailto:erc@socalgas.com).

Except where otherwise noted, all seminars are held at The Gas Company's Energy Resource Center, 9240 Firestone Blvd., Downey, CA 90241.

Programs: Program content and speakers are subject to change without notice. Space is limited, and all programs are offered on a space-available basis. The Gas Company reserves the right to cancel any program. In the event of such cancellation, The Gas Company has no responsibility for non-refundable or other costs incurred by registrants in anticipation of any program. Registrants must be 16 years of age or older, and casual business attire is requested.

Cancellation policy: Written or verbal notice of cancellation by registrant should be received by The Gas Company at least seventy-two (72) hours prior to the start of the program.

Disclaimer: Content of seminars and other program information is general in nature and not guaranteed or warranted to provide solutions to any specific situation. Content is provided for information purposes only. The Gas Company is not responsible for the views, interpretations or recommendations made in any program, which reflect the positions of the presenters. The Gas Company does not endorse any particular product, manufacturer or service discussed, and does not represent that any goods or services are fit for any purpose or use.

Certification and Testing: Build It Green is the certification body for the Certified Green Building Professional training and is responsible for class logistics, development of training content, management of instructors, marketing, examinations, maintenance of the list of graduates, and communication to Certified Green Building Professionals regarding recertification requirements.

NAME		
TITLE	COMPANY	
STREET		
CITY	STATE	ZIP
PHONE	FAX	

E-MAIL  Please send schedules and event notices to my e-mail address.

#### HVAC SEMINARS: QUALITY INSTALLATION, MAINTENANCE AND SERVICE IN THE CALIFORNIA HVAC MARKET (CAQI/CAQM/CAQS) SERIES:

- System Performance Module Part 1  
Wednesday, September 9 (Seminar #20294)
- System Performance Module Part 2  
Thursday, September 10 (Seminar #20295)
- AC and Heat Pump Module Part 1  
Tuesday, September 22 (Seminar #20296)
- AC and Heat Pump Module Part 2  
Wednesday, September 23 (Seminar #20297)
- AC and Heat Pump Module Part 3  
Tuesday, September 29 (Seminar #20298)
- AC and Heat Pump Module Part 4  
Wednesday, September 30 (Seminar #20299)

#### SUSTAINABILITY SEMINARS:

- Accounting for the Water/Energy and GHG Relationship  
Wednesday, July 15 (Seminar #20917)  
Certified Green Building Professional Training  
Thursday and Friday, July 16 and 17  
(Seminar #20991) To register, go to [www.builditgreen.org/cgpb/course-description](http://www.builditgreen.org/cgpb/course-description)

- EnergyPro (State-Certified Software):  
Envelopes and Windows  
Wednesday, September 23 (Seminar #20327)
- EnergyPro (State-Certified Software):  
Indoor and Outdoor Lighting  
Wednesday, September 23 (Seminar #20328)
- EnergyPro (State-Certified Software):  
Mechanical  
Thursday, September 24 (Seminar #20329)
- EnergyPro (State-Certified Software):  
Advanced  
Thursday, September 24 (Seminar #20330)

#### INDUSTRIAL TECHNOLOGIES SEMINARS:

- Combustion Seminar - Chatsworth  
Wednesday and Thursday, July 15 and 16  
(Seminar #20130)
- Understanding Boiler Basics  
Wednesday, September 17 (Seminar #20120)
- Introduction to Thermographics Applications  
Monday and Tuesday, July 27 and 28  
(Seminar #21306)
- Wednesday and Thursday, July 29 and 30  
(Seminar #20801)

#### SAVINGS BY DESIGN SERIES:

- Optimizing Heat Utilization and Waste Heat Management  
Tuesday, July 21 (Seminar #20804)
- Industrial Burner and Control Technologies for Energy Efficiency  
Wednesday, July 22 (Seminar #20805)

#### DOE/CEC SERIES:

- Steam Assessment  
Wednesday, August 26 (Seminar #20580)
- Pump System Assessment  
Wednesday, September 23 (Seminar #20579)

#### PRAC CHP SERIES:

- Combined Heat and Power (CHP) for Reliability and Premium Power  
Tuesday, August 25 (Seminar #18630)

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### Sustainability

#### Accounting for the Water/Energy/GHG Relationship

Wednesday, July 15 (Seminar #20917)

Time: 8:30 a.m. - noon (8:00 a.m. check-in and continental breakfast.)

Cost: Free

Participants in this workshop will leave with an understanding of the water-energy-greenhouse gas connection in California while learning about the variability of this relationship in different regions in the state. In addition, attendees will be able to develop synergies for joint programs among water and energy agencies. Our expert, Gary Klein, will also lead participants in a discussion of programs and policies that improve multiple parts of the water-energy-greenhouse gas connection.

Participants will be expected to bring to class basic information on the amount of water that is pumped, delivered (sold) and un-accounted for; waste water that is collected, treated and discharged; and the energy expended for doing each of these functions.

#### Certified Green Building Professional Training

Thursday and Friday, July 16 and 17 (Seminar #20991)

Time: 8:00 a.m. - 5:00 p.m. (7:30 a.m. check-in and continental breakfast. Lunch provided.)

Cost: \$400 for Build It Green members  
\$450 for non-members

For more information and registration, go to:  
<http://www.builditgreen.org/cgbb/course-description>

Co-sponsored with:



As green building becomes more popular, homeowners and home buyers are looking for contractors, architects, engineers, specialty contractors and real estate professionals who are qualified to provide green building services. Now is your chance to establish yourself in this potentially profitable niche and distinguish yourself in this growing marketplace.

Course content includes:

- Energy conservation, efficiency and renewable energy
- Resource conservation
- Indoor air quality
- Developing and marketing a green business

This two-day, 16-hour course is based on the overarching principles of green building and a systems approach to the design, construction and operation of buildings. The course is followed by a written exam.

#### EnergyPro® (State-Certified Software): Envelope and Windows

Wednesday, September 23 (Seminar #20327)

Time: 8:30 a.m. - 11:30 a.m.  
(8:00 a.m. check-in and continental breakfast.)

Cost: Free

Learn how to model and document Title 24 compliance for building envelopes. Participants in this workshop will be provided the opportunity to practice using the latest version of EnergyPro 4.0, an energy modeling software certified currently by the State of California. Explore advanced envelope design options. Learn about new fenestration requirements, and how to select windows for maximum energy efficiency and comfort.

Education Credits: 3 AIA learning units

#### EnergyPro® (State-Certified Software): Indoor and Outdoor Lighting

Wednesday, September 23 (Seminar #20328)

Time: 1:00 p.m. - 4:30 p.m. (12:30 p.m. check-in and lunch.)

Cost: Free

Learn how to model and document Title 24 compliance for commercial lighting designs. Participants in this workshop will be provided the opportunity to practice using the latest version of EnergyPro 4.0, an energy modeling software certified currently by the State of California. Explore lighting analysis basics, the proper application of advanced fixture technologies to energy-efficient designs, and how cost-effective lighting designs can maximize potential energy efficiency incentives.

Education Credits: 3 AIA learning units

#### EnergyPro® (State-Certified Software): Mechanical

Thursday, September 24 (Seminar #20329)

Time: 8:30 a.m. - 11:30 a.m.  
(8:00 a.m. check-in and continental breakfast.)

Cost: Free

Participants will practice using the latest version of EnergyPro, an energy modeling software certified currently by the State of California. Learn how to model mechanical system designs in commercial buildings, and to document Title 24 compliance. Discover how easy it can be to integrate mechanical, lighting, and envelope designs for peak energy efficiency performance.

Education Credits: 3 AIA learning units

#### EnergyPro® (State-Certified Software): Advanced

Thursday, September 24 (Seminar #20330)

Time: 1:30 p.m. - 4:30 p.m. (12:30 p.m. check-in and lunch.)

Cost: Free

Expand your basic knowledge of EnergyPro, an energy modeling software certified by the State of California, and learn how to produce energy-efficient designs that meet or exceed the minimum Title 24 energy standards. Get hands-on experience in modeling and upgrading envelope, lighting and mechanical designs to maximize potential energy efficiency incentives. Practice estimating utility energy costs, simple paybacks and life cycle costs.

Education Credits: 3 AIA learning units

### Sign-up for My Account and save the environment too!

Did you know that for every 2,900 customers who switch to paperless billing, we save one ton of paper, 16,450 gallons of water and 1,941 pounds of solid waste? And we avoid emitting 5,058 pounds of greenhouse gases.\* Here's a simple way to help the environment. Have your recent gas bill handy and sign up for paperless billing on your business or residence through My Account at [www.socalgas.com](http://www.socalgas.com).

For more information about what My Account offers go to [www.socalgas.com](http://www.socalgas.com).

\*Environmental impact estimates were made using the Environmental Defense Paper Calculator.

### Industrial Technologies

#### Combustion Seminar: Chatsworth

Wednesday and Thursday, July 15 and 16 (Seminar #20130)

Time: 8:00 a.m. - 2:30 p.m. (7:30 a.m. check-in and continental breakfast. Lunch provided.)

Cost: Free

Location: The Gas Company  
9400 Oakdale Avenue, Chatsworth, CA 91311

This two-day training session is designed to give business owners, facility managers, plant and maintenance engineers and other engineering personnel a basic knowledge of natural gas equipment, combustion and air quality guidelines. Topics will include efficient and cost-effective ways to maintain and operate gas-burning equipment, energy conservation, incentive programs and compliance with air quality regulations.

#### Introduction to Thermographic Applications: Using Infrared Cameras to Improve Energy Efficiency

Monday and Tuesday, July 27 and 28 (Seminar #21306)

Wednesday and Thursday, July 29 and 30 (Seminar #20801)

Time: 9:00 a.m. - 3:30 p.m. (8:30 a.m. check-in and continental breakfast. Lunch provided.)

Cost: Free

This two-day training series will focus on the benefits of hands-on applications of thermographic imaging equipment. Classroom time and field work will cover electrical and mechanical systems, as well as approaches to production and process-related problems. This training series is limited to 18 attendees.

#### Understanding Boiler Basics

Thursday, September 17 (Seminar #20120)

Time: 9:00 a.m. - 3:00 p.m. (8:30 a.m. check-in and continental breakfast. Lunch provided.)

Cost: Free

This seminar provides owners and operators of boilers with an explanation of boiler controls, interlocks safety and combustion air requirements. It also covers techniques that may help improve boiler and distribution system efficiencies as well as energy efficiency. In addition, air quality and boiler operation guidelines will be discussed.

#### Optimizing Heat Utilization and Waste Heat Management

Tuesday, July 21 (Seminar #20804)

Time: 9:00 a.m. - 3:00 p.m. (8:30 a.m. check-in and continental breakfast. Lunch provided.)

Cost: Free

This seminar offers guidance in design, selection, and operation of industrial heating equipment such as furnaces, melters, dryers, ovens, heaters and kilns to save energy. The course material includes demonstrations using calculators and software tools to estimate reductions in energy use and dollar savings with use of energy-saving methods.

Co-sponsored with:



These programs are funded by California utility customers and administered by Southern California Gas Company under the auspices of the California Public Utilities Commission. California consumers are not obligated to purchase any product or service mentioned in these programs.

#### Industrial Burner and Control Technologies for Energy Efficiency

Wednesday, July 22 (Seminar #20805)

Time: 9:00 a.m. - 3:00 p.m. (8:30 a.m. check-in and continental breakfast. Lunch provided.)

Cost: Free

This seminar will cover the vast array of burner technologies from atmospheric to power burners. It includes discussion of design considerations for determining the appropriate burner designs for industrial process requirements and advanced control strategies.

#### Steam Assessment

Wednesday, August 26 (Seminar #20580)

Time: 8:00 a.m. - 4:30 p.m. (7:30 a.m. check-in and continental breakfast. Lunch provided.)

Cost: Free

This one-day Department of Energy course covers the operation of typical steam systems and discusses methods of system efficiency improvements. The training helps industrial and institutional plant personnel—energy managers, steam system supervisors, engineers and equipment operators identify opportunities to improve steam system performance. The training is co-sponsored by The Department of Energy, California Energy Commission, and The Gas Company.

Co-sponsored with:



U. S. Department of Energy

California Energy Commission

#### Pump System Assessment

Wednesday, September 23 (Seminar #20579)

Time: 8:00 a.m. - 4:30 p.m. (7:30 a.m. check-in and continental breakfast. Lunch provided.)

Cost: Free

This one-day introductory workshop is designed to teach facility engineers, operators and maintenance staff about pump system performance characteristics. It also introduces use of the Pump System Assessment Tools (PSAT). The training is co-sponsored by The Department of Energy, California Energy Commission, and The Gas Company.

#### Combined Heat and Power (CHP) for Reliability and Premium Power

Tuesday, August 25 (Seminar #18630)

Time: 8:30 a.m. - 1:00 p.m. (8:00 a.m. check-in and continental breakfast. Lunch provided.)

Cost: Free

This seminar will focus on natural-gas fired technologies and heat recovery technologies that can be used for power reliability and "premium power" applications and that can provide critical support of space conditioning loads. Learn from industry experts and listen to end users that have experience using this equipment and learn how it might help you in your own application.

Co-sponsored with:



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