



JUNE 16-17, 2004 • ANAHEIM, CA
ANAHEIM CONVENTION CENTER



Preparing for the future

Companies brace for future energy shocks as economy picks up



Outstanding venue: The Anaheim Convention Center is a modern and spacious setting for the 22nd West Coast Energy Management Congress. Leading West Coast energy professionals will converge on the Center for this premier energy event. *Photo courtesy of AEE/CEC*

Even before the blackout of the Summer of 2003, the San Diego Regional Energy Office predicted that California would need to rely more on energy efficiency, small scale generation, and renewables to avoid higher electric prices and reliability problems.

The West Coast Energy Management Congress is the largest energy conference and technology held in California specifically focused on energy users from business, industry, and institutions. It brings together the top experts in all areas of the field to help attendees set a clear, optimum path to both energy cost control and energy supply security. Explore promising new technologies, compare energy supply and alternative energy options, and learn about innovative and cost-conscious project implementation strategies. The multi-track conference covers a variety of topics, many specific to the region.

The West Coast Energy Management Congress, now in its 22nd year, is the one place to learn the latest in "leading edge" energy efficiency and distributed generation technologies to make your company more profitable and minimize the "risk" of future energy supply disruptions. Some of the highlights of this year's West Coast Energy Management Congress include:

Green Buildings: This comprehensive program addresses the new LEED certification program for existing buildings. Attendees will learn how this new standard integrates with the U.S. EPA ENERGY STAR rating system and how to meet indoor air quality and building commissioning requirements. In addition, high performance schools and sustainable design, as well as gas cooling technologies for high performance facilities, will be covered.

Distributed Generation: Distributed generation technologies and applications offer reliability options that are cost effective and improve dependability. An exciting program on Fuel Cells covers application of high-temperature carbonate fuel cells, proton-exchange fuel cells, and tubular oxide fuel cell technology. Also, best practices in Combined Heat & Power (CHP) and Onsite Generation will be presented in detail along with operating case studies.

Load and Energy Management: The conference program will explore the value of incentives as a means of providing attractive alternatives for company efforts to reduce demand. Demand response programs and innovative demand reduction technologies will also be studied.

The WCEMC event has gained the reputation of tackling the "hot topics" and providing attendees with real-world solutions to their energy and facility management challenges. If you are a decision-maker, such as a president or CEO, vice president of operations, energy manager or facility manager, building owner or property manager, energy or plant engineer, end user, consultant, energy service professional, or a utility customer representative, you owe it to yourself to register to attend this event.

Seminars: Held in conjunction with the two-day conference program, the Association of Energy Engineers will offer three certification seminars plus a one-day seminar.



Technology transfer: Learning about proven techniques and new technologies is a key benefit that AEE's conference brings to show attendees in search of improved productivity.

Powerful sponsors help develop this innovative event

Along with this year's show Host Southern California Gas Company and San Diego Gas & Electric, which are part of Sempra Energy Utilities, a number of distinguished organizations are providing support to the 22nd West Coast Energy Management Congress (WCEMC) as sponsors of the Anaheim, California event. Among those committed at press-time were: U.S. Department of Energy, Federal Energy Management Program (FEMP); The California Energy Commission; The Alliance to Save Energy; San Diego Regional Energy Office; *Energy User News*; U.S. EPA ENERGY STAR Program; U.S. Department of Energy/Office of Energy Efficiency and Renewable Energy/Building Technologies/Rebuild America; Energy Solutions Center; and the Gas Technology Institute.

Presented by

Hosted by

San Diego Gas & Electric (SDG&E) and Southern California Gas Company are separate companies. Each utility has a distinct service area within the Southern California region.

Non-Profit Organization
U.S. Reg. # 13-0880000
THE ASSOCIATION OF
ENERGY ENGINEERS

Association for Professional Engineers
1005 West 10th Street, Suite 400
Alhambra, CA 91806-4208

Show offers \$200 discount for early EMC registration

The Association of Energy Engineers, presenter of the 22nd West Coast Energy Management Congress, has announced a V.I.P. conference discount offer of \$595 for registrations made prior to June 10, 2004. For registrations submitted prior to this deadline, attendees will save \$200 off the regular registration fee of \$795.

AEE points out that this discount offers huge potential savings for organizations that want to maximize their education budgets and could take advantage of this special opportunity to

send more of their employees to this premier West Coast event.

This offer excludes AEE membership fees, seminar fees, and any charges relating to exhibiting at the WCEMC Expo. This V.I.P. discount offer may not be combined with any other discount offers nor with package rates and is valid only for the West Coast EMC show in 2004.

To qualify, simply attach the discount coupon at right to your completed registration form and send with payment prior to the deadline.

EARLY REGISTRATION DISCOUNT COUPON

Simply attach this coupon to your completed registration form and return with your payment prior to the registration deadline of June 10, 2004.

Tour of National Fuel Cell Research Center announced

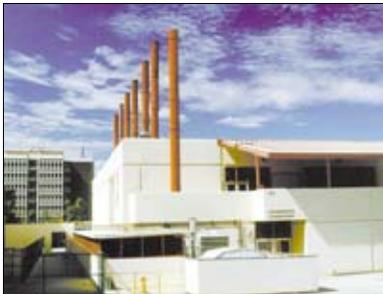
The National Fuel Cell Research Center (NFCRC) will host a tour of its facilities on Wednesday, June 16, from 2:45 pm to 5:00 pm. The tour will include the hydrogen-fueled Toyota Fuel Cell Hybrid Vehicle (FCHV), a variety of grid-connected fuel cells and micro-turbine generators, and the world's first fuel cell/gas turbine hybrid.

Also included will be the research laboratories in fundamental and applied research in both fuel cell and gas turbine combustion technology, applications from residential to 300-megawatt coal-fired central generation, hydrogen-generation and refueling, and distributed generation.

Additionally, the auspices of the Advanced Power and Energy Program (APEP) will be part of the tour.

The Research Center points out that attendance at the tour is limited to the first 50 persons. Participants will meet in front of the registration desk at 2:45 pm. A bus is scheduled to pick up attendees at the Anaheim Convention Center at 3:00 pm.

To sign up for the tour of the Research Center, use the appropriate section on the registration form on the last page of this newspaper.



Tour site: Exterior view shows part of the National Fuel Cell Research Center.



Innovation: Tour includes a look at the world's first fuel cell/gas turbine hybrid.

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SPONSORS

Powerful sponsors develop and support the show

ABOUT THE HOST:

Southern California Gas Company (SoCalGas) and San Diego Gas & Electric (SDG&E) are part of Sempra Energy Utilities, a subsidiary of Sempra Energy (NYSE:SRE), a Fortune 500 energy services holding company based in San Diego. SoCalGas is the nation's largest natural gas distribution utility, serving 18 million consumers through 5.2 million meters. The company's service area encompasses 23,000 square miles in most of central and southern California. SDG&E is an electric and natural gas utility providing service to 3 million consumers. SDG&E serves San Diego and southern Orange Counties, encompasses 4,100 square miles, covering two counties and 25 cities.

ABOUT THE SPONSORS:

The California Energy Commission has helped spur over \$400 million in energy technology export sales from California to the international marketplace. This program concentrates on international energy projects requiring up to \$100 million in capital investments, with the average size approximately \$28 million. Examples of projects include industrial cogeneration, energy efficiency in buildings, and small power plant development. Small- and medium-sized companies represent over 85% of the Commission's clientele for the export program.

The San Diego Regional Energy Office (SDREO) is an independent, public-benefit, nonprofit corporation. SDREO serves as the information clearinghouse for energy information to the region and serves as a critical link with state and federal energy programs that can benefit consumers. SDREO's mission is to assist the public, nonprofit, and private sectors in the San Diego region in implementing policies and programs to improve the overall energy security and efficiency, while mitigating the environmental impacts of energy use.

The U.S. Department of Energy, Federal Energy Management Program, works to reduce the cost of government by advancing energy efficiency, renewable energy, and water conservation. FEMP accomplishes this by creating partnerships, leveraging resources, transferring technology, and providing training and support.



Rebuild America
U.S. Dept. of Energy

Rebuild America is a network of hundreds of community-based partnerships across the nation dedicated to energy savings, improving building performance, easing air pollution through reduced energy demand, and enhancing the quality of life through energy efficiency and renewable energy technologies. The program serves as a tool for community revitalization and job creation in many U.S. communities.



ENERGY STAR
U.S. EPA

U.S. EPA ENERGY STAR is a dynamic government/industry voluntary partnership that offers businesses and consumers energy-efficient solutions that make it easy for them to save money and protect the environment. In addition to products, ENERGY STAR has expanded to cover homes and commercial and industrial facilities. Whether you're looking for energy-efficient products or to improve the efficiency of a building, ENERGY STAR can help. With ENERGY STAR, money isn't all you're saving.



GTI

The Gas Technology Institute (GTI) is the leading research, development, and training organization serving energy and environmental markets. GTI is dedicated to meeting the nation's current and future energy needs and environmental challenges by developing solutions for consumers, industry, and government.



Alliance to Save Energy

The Alliance to Save Energy is a coalition of prominent business, government, environmental, and consumer leaders who promote the efficient and clean use of energy.



ESC
Energy Solutions Center

The Energy Solutions Center is a 501(c)(6) technology commercialization and market development organization representing 31 energy utilities, 13 municipal energy authorities, and 30 equipment manufacturers and vendors. The mission of the Center is to accelerate the acceptance and deployment of new energy-efficient, gas-fueled technologies that enhance the operations and productivity of commercial and industrial energy users, and improve comfort and reliability for residential energy users.

ment of new energy-efficient, gas-fueled technologies that enhance the operations and productivity of commercial and industrial energy users, and improve comfort and reliability for residential energy users.

RECEPTION COSPONSOR



ENERGY USER NEWS

Energy User News is edited for professional energy managers, facility managers, and building owners. Coverage includes all areas of facility management related to energy-intensive building systems, fuel and power acquisition, and relevant state and federal legislation. Energy User News reports on such major system technology categories as lighting, heating, air conditioning (HVAC), building automation, building envelope, and independent power generation.



New ideas: Exhibitors present industry's latest technologies.

AT A GLANCE

Conference and seminar program overview

DAY ONE - WEDNESDAY, JUNE 16, 2004

Conference Opening Session: Strategic Market Directions - 9:15 - 11:00 am

Luncheon in Exhibit Hall for Conference Attendees - 12:00 noon

Exhibits Open - 10:00 am - 4:00 pm

Track 1:
Distributed Generation and Power Reliability

Track 2:
Green Buildings and Sustainable Design

Track 3:
Energy Management and Demand Response

SESSION 1A:
WEDNESDAY, JUNE 16 • 2:30 - 4:30 pm
Fuel Cells: Application,
Technology, and Cost Update

SESSION 2A:
WEDNESDAY, JUNE 16 • 2:30 - 4:30 pm
Green Buildings

SESSION 3A:
WEDNESDAY, JUNE 16 • 2:30 - 4:30 pm
Load Management

DAY TWO - THURSDAY, JUNE 17, 2004

SESSION 1B:
THURSDAY, JUNE 17 • 9:00 - 11:00 am
Combined Heat and Power,
and Onsite Generation

SESSION 2B:
THURSDAY, JUNE 17 • 9:00 - 11:00 am
Technologies for High
Performance Facilities

SESSION 3B:
THURSDAY, JUNE 17 • 9:00 - 11:00 am
Natural Gas Technologies and
Demand Response Programs

Luncheon in Exhibit Hall for Conference Attendees - 12:00 noon

Exhibits Open - 10:00 am - 2:00 pm

SESSION 1C:
THURSDAY, JUNE 17 • 2:30 - 4:30 pm
Critical Issues of Energy
Purchasing Forum

SESSION 2C:
THURSDAY, JUNE 17 • 2:30 - 4:30 pm
Case Studies: Sustainable
Buildings for the 21st Century

SESSION 3C:
THURSDAY, JUNE 17 • 2:30 - 4:30 pm
Energy Management

THREE-DAY AND ONE-DAY SEMINAR OFFERINGS:

The Theory and Practice of Distributed Generation and Onsite CHP / June 15-17 / 9:00 am - 5:00 pm

Fundamentals of Lighting Efficiency / June 15-17 / 9:00 am - 5:00 pm

Fundamentals of Measurement & Verification: Applying the New IPMVP / June 15-17 / 9:00 am - 5:00 pm

Creating a Strategic Energy Plan / June 15 / 9:00 am - 5:00 pm

OPENING

Dynamic session kicks off this year's conference

Opening Session: Strategic Market Directions - Wednesday, June 16, 2004 - 9:15 - 11:00 am

Chair: RICHARD J. COSTELLO, P.E., C.E.M., C.L.E.P., President, Acela Energy Group

9:15-9:30 am

Welcome
ALBERT THUMANN, P.E., C.E.M., C.C.P.,
Executive Director,
Association of Energy Engineers

9:30-10:00 am

Energy Supply and Demands in Southern
California
GEOFF AYRES, Director of C/I Markets,
Southern California Gas Company

10:00-10:30 am

Impact of the National Energy Plan on
the California Marketplace
MARK HOPKINS, Acting Co-President,
Alliance to Save Energy

10:30-11:00 am

New Pathways: Green Sustainable
Buildings
PETER J. GARFORTH, P.E.,
Garforth International LLC



Thumann



Ayres



Hopkins



Garforth

The 22nd West Coast Energy Management Congress Final newspaper is published annually by the Association of Energy Engineers, 4025 Pleasantdale Road, Suite 420, Atlanta, GA 30340-4264 March 2004 / Issue Number 1

PROGRAM**The latest information for energy professionals****Track 1: Distributed Generation and Power Reliability****SESSION 1A:**
WEDNESDAY, JUNE 16 • 2:30–4:30 pm**Fuel Cells: Application, Technology, and Cost Update****Chair:** JACK BROUWER, Ph.D., Associate Director, National Fuel Cell Research Center, University of California, Irvine

2:30-3:00 pm

Applications of High-Temperature Carbonate Fuel Cells in Commercial and Industrial Applications – Tomorrow's Hydrogen Benefits with Today's Fuel Infrastructure
STEPHEN R. TORRES, Vice President, Western Region, FuelCell Energy, Inc.

3:00-3:30 pm

Why My Fuel Cell Price Forecast is Superior to Others
BYRON WASHOM, Spencer Management Associates

3:30-4:00 pm

Proton Exchange Membrane Fuel Cells for Residential Stationary Power, Reliability, and Uninterruptible Power Supplies – Recent Experiences at Plug Power
L. SCOTT WILSHIRE, Plug Power

4:00-4:30 pm

Development and Application of Tubular Solid Oxide Fuel Cell (SOFC) Technology in Cogeneration and Hybrid Applications
CHRISTIAN FORBES,
Siemens Westinghouse Power Corporation**SESSION 1B:**
THURSDAY, JUNE 17 • 9:00–11:00 am**Combined Heat and Power, and Onsite Generation****Chair:** ANTONIO J. PRIETTO,
Self-Generation Incentive Program Manager,
Southern California Gas Company

9:00-9:30 am

CHP Case Studies – Saving Money and Increasing Security
STEVE GILLETTE, Director, Business Development,
Capstone Turbine Corporation

9:30-10:00 am

CHP & ICHM: Meeting the Needs of Evolving Emission Mandates and Legislation
GUY ARCHBOLD, CEO, BluePoint Energy Products, Inc.

10:00-10:30 am

California's Self-Generation Incentive Program (AB970 and AB1685)ANTONIO J. PRIETTO,
Self-Generation Incentive Program Manager,
Southern California Gas Company

10:30-11:00 am

Integrated CHP and Gas Cooling
LUCAS B. HYMAN, P.E., President, Goss Engineering, Inc.,
and MILTON MECKLER, P.E., C.P.C., C.Mig.E.,
President, Design Build Systems**SESSION 1C:**
THURSDAY, JUNE 17 • 2:30–4:30 pm**Critical Issues of Energy Purchasing Forum****Chair:** PETER W. LIVINGSTON, P.E., C.E.M.,
President,
Livingston Engineering

2:30-4:30 pm

PANELISTS:
MARJORIE A. SCHMIDT-PINES,
Market Advisor, Energy Markets & Capacity Products,
Southern California Gas CompanyJOHN GABBARD, P.E., C.E.M.,
Vice President, Technical Services,
DG Energy SolutionsRICHARD J. COSTELLO,
President,
Acela Energy GroupPETER W. LIVINGSTON, P.E., C.E.M.,
President,
Livingston Engineering**Track 2: Green Buildings and Sustainable Design****SESSION 2A:**
WEDNESDAY, JUNE 16 • 2:30–4:30 pm**Green Buildings****Chair:** RANDALL T. HIGA, Commercial New Construction Supervisor, Southern California Gas Company

2:30-3:00 pm

Commissioning of LEED Gold and Platinum Facilities
ERIK W. RING, P.E., Manager of Energy Engineering,
CTG Energetics, Inc.

3:00-3:30 pm

Sustainable Campus LEEDers
LEE C. TAPPER, P.E., C.I.A.Q.P.,
Associate, Office Manager,
Director of LEED, Holabird & Root

3:30-4:00 pm

The Evolution of the PV Grid-Connected Market in the U.S.
STEVE MCKENERY,
Vice President of Southern California Sales,
PowerLight Corporation

4:00-4:30 pm

Collaborative for High Performance Schools
RANDALL T. HIGA,
Commercial New Construction Supervisor,
Southern California Gas Company**SESSION 2B:**
THURSDAY, JUNE 17 • 9:00–11:00 am**Technologies for High Performance Facilities****Chair:** STEPHEN J. RAWSKI, P.E., C.E.M., C.D.S.M., C.L.E.P.,
Senior Account Executive, Southern California Gas Company

9:00-9:30 am

Advanced Lighting Technologies
KATHLEEN PEAKE, LC, IES, ASID, President,
The Lighting Collaborative, Inc.

9:30-10:00 am

Engine Technology Update
RONALD FISKUM, Program Manager, TAHP/Fuel Cells &
IC Engines, U.S. Department of Energy

10:00-10:30 am

Replicable CHP Designs for Industrial Applications
RICHARD BILJETINA, Director, Energy Technologies,
Energy Solutions Center Inc.

10:30-11:00 am

Toyota South Campus – Driving Environmental Leadership
MARK YAMAUCHI, Facilities Operations Manager,
Toyota Motor Sales, USA, Inc.**SESSION 2C:**
THURSDAY, JUNE 17 • 2:30–4:30 pm**Case Studies: Sustainable Buildings for the 21st Century****Chair:** ALEXANDER Y. KIM, C.E.M., C.C.P., D.G.C.C.P.,
Sustainable Technologies Business,
San Diego Gas & Electric Company

2:30-3:00 pm

Maximizing Energy Savings with Enterprise Energy Management Systems
JOHN VAN GORP, C.E.M., Industrial & Institutional Systems
Marketing Manager, Power Measurement

3:00-3:30 pm

Case Study: Marin County Offices – Energy Conservation, Power Production, and Cost Savings
ARNO HARRIS, CEO, Prevalent Power, Inc., and
MARC ROPER, Director of Sales, RWE SCHOTT Solar, Inc.

3:30-4:00 pm

Case Studies for High Performance Schools
GREG SHANK, Manager of Sustainability Services,
CTG Energetics, Inc.

4:00-4:30 pm

Building It the Right Way: A Building Owner's Experience with LEED
PAUL GIBSON, Principal, TKG Engineering**Track 3: Energy Management and Demand Response****SESSION 3A:**
WEDNESDAY, JUNE 16 • 2:30–4:30 pm**Load Management****Chair:** SUSIE E. SIDES, C.E.M., C.D.S.M., Programs Manager,
San Diego Gas & Electric

2:30-3:00 pm

Incentives for Load Management
GORDON BROWN, Operations Manager, Southern California
Operations, California Independent System Operator

3:00-3:30 pm

Customer Perspective on Demand Response
JON JAMIESON, Quality Manager, American Design Inc.

3:30-4:00 pm

Major Peak Load Reductions and LEED Gold Ratings with Thermal Energy Storage
MARK M. MacCRACKEN, P.E., CEO,
CALMAC Manufacturing Corporation

4:00-4:30 pm

Measures End Users Can Employ for Demand Response
RICHARD J. COSTELLO,
President,
Acela Energy Group**SESSION 3B:**
THURSDAY, JUNE 17 • 9:00–11:00 am**Natural Gas Technologies and Demand Response Programs****Chair:** TUAN H. NGUYEN, P.E., C.E.M., Market Advisor,
San Diego & Electric

9:00-9:30 am

Natural Gas Industrial Refrigeration Advances
THOMAS P. NAU, JR.,
RESCO (Refrigeration Equipment Specialist Company)

9:30-10:00 am

Desiccant Systems
ANDY KINARD, C.E.M., DryKor Strategic Accounts Manager,
DryKor, Inc.

10:00-10:30 am

Title 24 and Beyond
KAREN KLEPACK, Account Executive,
Southern California Gas Company

10:30-11:00 am

Advanced CHP Technologies for Efficient, Environmentally Friendly, and Flexible Energy Management
JOSEPH RABOVITZER, Ph.D.,
Associate Director Power Generation,
GTI**SESSION 3C:**
THURSDAY, JUNE 17 • 2:30–4:30 pm**Energy Management****Chair:** JAMES P. WALTZ, P.E., C.E.M., A.C.F.E., President,
Energy Resource Associates Inc.

2:30-3:00 pm

Case Study: Best Practices in Energy Management
ROBERT A. BARKER, Assistant Vice President,
Dallas-Fort Worth International Airport

3:00-3:30 pm

Energy Planning for Cities, Utilities, and Companies in an Uncertain Future
MARK ALLEN BERNSTEIN, Ph.D., Senior Policy Analyst,
RAND Corporation, and
DID PELSTON, Managing Partner, Energy Innovation Group, LLC

3:30-4:00 pm

New Financing Opportunities and the Impact of the Tax Act of 2003 on Energy Projects
WILLIAM GARNETT, III, Senior Vice President,
PFG Energy Capital

4:00-4:30 pm

Emerging Gas Technologies: Applications, Technologies, and Return on Investment
TIMOTHY P. WHALEN, C.E.M., Senior Account Executive,
The Gas Company**Seven of the noted energy professionals who'll present key new data...**

Barker



Gillette



MacCracken



Pelston



Torres



Van Gorp



Waltz

SEMINARS

Certification seminars highlight show offerings

The Theory and Practice of Distributed Generation and Onsite CHP

A preparatory course for the DGCP examination / June 15-17, 2004 / 9:00 am - 5:00 pm / Earns 2.4 CEU or 24 PDH

About the seminar: This comprehensive three-day course will cover all of the technical, legal, and economic aspects of onsite generation systems, including renewable energy and distributed generation concepts. The course provides the knowledge and skills needed to design, economically evaluate, permit, select, install, and operate all types of onsite generation systems. The seminar also serves as a preparatory vehicle for AEE's Distributed Generation Certified Professional (DGCP) program. The DGCP exam will be administered on the day following the seminar at the same location. In order to sit for the exam, you must obtain a DGCP application package by contacting AEE's Certification Administrator at (770) 447-5083, Ext. 223. Note that registering for the three-day seminar does not automatically register you for the DGCP exam. An additional fee of \$200 is required for the certification application and exam.

Seminar Outline: Major areas covered by this seminar include:

- Introduction to distributed generation (DG) and combined heat and power (CHP)

- Distributed generation and CHP technologies
- Energy and thermal basics of distributed generation and CHP technologies
- Power cycle performance measures for distributed generation and CHP technologies
- Economic and life cycle cost analysis for distributed generation and CHP systems
- PURPA and FERC rules for QFs and SPPs
- Summary and applications of distributed generation and CHP technologies
- Regulatory and permitting systems issues for distributed generation and CHP systems
- Distributed generation and CHP project management
- Distributed generation and CHP case studies

About the Instructors:

BARNEY L. CAPEHART, Ph.D., C.E.M., C.D.S.M., D.G.C.P., is a professor emeritus of industrial and systems engineering at the University of Florida, Gainesville. He has broad experience in the commercial/industrial sector. He has personally

conducted over 100 audits of industrial facilities, and has assisted students in conducting audits of hundreds of office buildings and other non-industrial facilities.

CARL E. SALAS, P.E., C.C.P., C.D.S.M., is a principal in the firm of Salas O'Brien Engineers, San Jose, CA. Since 1974 he has been evaluating and redesigning existing facility infrastructures and power systems. He has surveyed, tested, or designed thousands of power/energy, energy efficiency, and infrastructure/utilities installations.

Fees for certification seminar only:

Regular fee: \$1350; AEE member fee: \$1250; government & nonprofit fee: \$1250; team discount, deduct \$100 per registrant.



Capehart



Salas

Fundamentals of Lighting Efficiency

A preparatory course for the CLEP examination / June 15-17, 2004 / 9:00 am - 5:00 pm / Earns 2.0 CEU or 20 PDH

About the seminar: This program is designed to provide a preparatory vehicle for professionals who wish to take the Certified Lighting Efficiency Professional (CLEP) exam, as well as an excellent broad-based instructional program for those who want to "brush up on the basics" of efficient lighting design, upgrade, and application. For the convenience of exam candidates, the CLEP exam will be given on the afternoon of Day 3 of the seminar at the same location. For more information on the CLEP program, contact AEE's Certification Administrator at (770) 447-5083, Ext. 223. Note that registering for the seminar program does not automatically register you for the CLEP exam. An additional fee of \$200 is required for the certification application and exam.

Seminar Outline: Major areas covered by this seminar include:

- Fundamentals of light and lighting
- Electrical basics and power quality
- Environmental concerns
- Building energy codes

- Regulatory compliance
- Utility and ESCO programs and incentives
- Lighting economics
- Lighting economics: problems and solutions
- Lighting quality
- Improving lighting systems
- Lamps and ballasts
- Luminaires and fixtures
- Lighting evaluation and audits
- Lighting controls
- Installation and commissioning
- Lighting systems operation and maintenance
- Lighting design process
- Lighting design calculations workshop

About the Instructors:

JOHN FETTERS, C.E.M., C.L.E.P., is a lighting efficiency consultant and president of Effective Lighting Solutions, Inc., Columbus, OH. He is a senior member of the Association of Energy Engineers and a member of IESNA, for which he serves

on the Industrial Lighting Committee. He has lectured and is widely published in the field of lighting efficiency.

T. KENNETH SPAIN, P.E., C.E.M., C.L.E.P., brings to this program over two decades of experience as an energy efficiency analyst. A senior research associate at the University of Alabama in Huntsville, he serves as project manager for IIdEAS, the Industrial Energy Advisory Service, advising clients regarding cost-effective applications of energy-saving technologies.

Fees for certification seminar only:

Regular fee: \$1150; AEE member fee: \$1050; government & nonprofit fee: \$1050; team discount, deduct \$100 per registrant.



Feters



Spain

Fundamentals of Measurement & Verification: Applying the New IPMVP

A preparatory course for the CMVP examination / June 15-17, 2004 / 9:00 am - 5:00 pm / Earns 2.0 CEU or 20 PDH

About the seminar: This program is designed to provide a useful preparatory vehicle for AEE's new measurement and verification professional certification program. The program will examine current methods of measuring and verifying savings, specifically reviewing recent changes in the International Performance Measurement & Verification Protocol (IPMVP). Attendees will learn the process of designing a proper M&V program for their projects, including cost/accuracy tradeoffs, baseline adjustments, the role of stipulations, maintaining space conditions, the role of verifiers, and the data needed for emission trading. Examples of specific techniques will be presented along with common pitfalls which can result in unreliable data. For your convenience, AEE has scheduled the CMVP exam to take place on the final day of the course at the same location. To obtain your CMVP application form, or to receive further information on the CMVP program, contact AEE's Certification Administrator at

(770) 447-5083, Ext. 223. Note that registering for the seminar program does not automatically register you for the CMVP exam. An additional fee of \$400 is required for the certification application and exam.

Seminar Outline: Major areas covered by this seminar include:

- Reasons for M&V
- Current M&V protocols
- IPMVP 2000 and its evolution
- Developing an M&V plan
- Current issues in M&V
- Baseline adjustments
- Federal energy project requirements
- Verification of: the plan, the baseline, the savings, the adjustments
- Key elements of success: theory and examples of IPMVP 2000 options

- Selecting options
- Compliance/adherence with protocols and contracts

About the Instructor:

JOHN D. COWAN, P.Eng., M.B.A., President of Environmental Interface Limited, is co-chair of the IPMVP Technical Committee for its 2000 edition. He is also actively involved in developing M&V guidelines through ASHRAE's Guideline Committee 14. During his 23 years in the energy management business, he has been a consulting engineer, an ESCO owner/manager, and an owner's rep in energy performance contracting matters.

Fees for certification seminar only:

Regular fee: \$1150; AEE member fee: \$1050; government & nonprofit fee: \$1050; team discount, deduct \$100 per registrant.



Cowan

Creating a Strategic Energy Plan

A one-day course / June 15, 2004 / 9:00 am - 5:00 pm / Earns .8 CEU or 8 PDH

About the seminar: This intensive workshop is specially designed for energy managers and other facility professionals whose responsibilities include developing and implementing a comprehensive energy management program for their organizations. Recognizing that a successful program must integrate energy planning with other critical planning activities, this program takes you step-by-step through the areas which are critical to your plan's success. You'll gain a better understanding of the ways in which accountability for results, establishment of meaningful measures and goals, a commitment to regular review, and the personal endorsement of senior leadership are all critical ingredients for an effective energy management program. You will leave this program armed with powerful new tools you can apply right away to more effectively guide your organization toward achieving optimum and sustained long-term energy savings.

Seminar Outline: Major areas covered by this seminar include:

- Key components of effective energy management
- A thorough review of the five focus areas of energy management
- Creation of a "Current State" Assessment through the completion of a Performance Scorecard and an energy baseline map.
- The techniques and methodology to develop a Strategic Energy Plan
- Key components of a Strategic Energy Plan with templates and a sample completed plan
- How to effectively implement and monitor the Strategic Energy Plan keeping the plan a living document

About the Instructor:

JIM HESS is an Associate of GEM Management Consultants, Inc. and President of Hess Consulting. His efforts are focused on improving the impact of energy professionals on their organization's bottom line. He has designed programs that help clients achieve optimum energy management

results by effectively managing their energy data and supply programs, evaluating facility energy performance, prioritizing systems and equipment for improved performance, and integrating energy planning with other critical business planning activities. Prior to founding his consulting business, Mr. Hess was the Vice President of Marketing and Key Accounts at TXU Energy. His primary responsibilities were the development of TXU's "Go to Market Strategy" for electricity deregulation in the state of Texas. He had extensive contact with customers during the development of this strategy and understands the challenges energy professionals face in bringing energy awareness to the forefront of their organizations.

Fees for one-day seminar: \$480.



Hess



Goal-oriented: Attendees at AEE seminars can help meet career objectives by taking one of the Association's certification seminars—three of which are being offered along with the 2004 Congress.



Leading edge information: Attendees at AEE seminars and conferences benefit from the latest techniques and proven technologies that can save their companies money while improving productivity.

EVENTS

Special events highlight Congress week

Peter Garforth to speak on green sustainable buildings at the opening session



Peter J. Garforth, P.E., of Garforth International LLC, will present a keynote speech at the West Coast Energy Management Congress in Anaheim, California. During the opening session, Mr. Garforth will discuss "New Pathways: Green Sustainable Buildings." Previous to establishing his consulting company, Mr. Garforth was Vice President of Strategy and Business Development at Owens Corning. "We know it is possible to construct buildings," Garforth says, "that use substantially less energy than

is the case in normal practice. However, there is a prevalent perception that designing and building in this way will result in cost levels that are uncompetitive in the 'real world' real estate market. Closer examination suggests that a failing to develop a widespread market for high-performance buildings is having a negative impact on global competitiveness for both the builders and users of buildings. "Too often energy productivity is cast more as an environmental question, with less emphasis on the

economic and business dimensions. Worldwide, energy costs between \$3 and \$3½ trillion. In North America, the combination of homes, commercial, and institutional buildings alone account for 40% of all energy use at a cost of some \$400 billion. This is a major potential productivity opportunity both from an economic and a climate change standpoint." Mr. Garforth will also explore how the U.S. stacks up against global best practices in buildings, and how this is affecting the competitiveness of the economy.

Major peak load reductions and LEED gold ratings are hot topics at WCEMC



Mark M. MacCracken, P.E., is the CEO of CALMAC Manufacturing Corporation, which is the largest manufacturer of thermal energy storage equipment in the world. Mr. MacCracken will present on "Major Peak Load Reductions and LEED Gold Ratings with Thermal Energy Storage," in the Load Management session on Wednesday afternoon of the Congress. The 2005 version of the Title 24 Energy Code will place major emphasis on peak load reduction, ASHRAE Standard 90.1, and therefore the USGBC

LEED guideline, is based on energy cost reduction in order to determine energy savings. Mr. MacCracken will also demonstrate how thermal energy storage can and has been used to dramatically reduce demand and energy usage. Other energy management and demand response subjects to be covered in this Wednesday afternoon track include a leadoff presentation on "Incentives for Load Management," a topic that will be explored by Gordon Brown, Operations Manager for Southern Cali-

fornia Operations for California Independent System Operators. The final talk of the afternoon, entitled "Measures End Users Can Employ for Demand Response," will be presented by Richard J. Costello, President of Acela Energy Group. Susie E. Sides, C.E.M., C.D.S.M., Programs Manager for San Diego Gas & Electric and session chairman, will close the session by discussing useful conclusions that can be drawn from the afternoon's presentations.

Chilled Water Energy Efficiency

A free seminar on Chilled Water Energy Efficiency will be offered on Tuesday, June 15, 2004, from 1:00 pm to 4:00 pm. The vast majority of chilled water systems circulate two to three times the needed capacity to efficiently cool a facility. This "low delta T syndrome" is a source of considerable wasted energy and lost capacity in facilities, new and old. This seminar will discuss optimizing the chilled water system to reduce energy consumption, obtain maximum diversity, and increase available capacity in an energy retrofit. Also, design standards for new buildings will be discussed. To register for this free seminar, please see Item 3 on the Registration Form on p.8.

Networking reception announced



Join reception host Gas Technology Institute for this unique networking opportunity. The reception is an ideal venue for all West Coast Energy Management Congress attendees to meet key energy experts, speakers, and manufacturers who will be on hand. The reception is also a chance to network with your industry peers. The date and time for this event will be announced when attendees register.



Training: AEE will present four seminars during show week, but also offers a comprehensive series of targeted courses throughout the year.



Diversity: Like other AEE shows, the West Coast Congress brings a broad mix of products and services to the show floor to help companies improve operations while cutting costs.



One-on-one time: AEE exhibits are the ideal setting for customers and suppliers to meet for the exchange of ideas and transfer of key information in specific areas of interest.

2004 EXPO HOURS

Wednesday, June 16
10:00 am – 4:00 pm

Thursday, June 17
10:00 am – 2:00 pm

22ND WEST COAST EMC ANAHEIM CONVENTION CENTER • HALL E

CONFERENCE ATTENDEE LUNCHEON AREA

1:14	1:26	2:30	3:30	4:36	5:46
1:42	1:42	2:42	3:42	4:42	5:42
1:38	1:39	2:39	3:39	4:39	5:39
1:36	1:37	2:36	3:37	4:37	5:37
1:34	1:36	2:34	3:34	4:34	5:34
1:32	1:33	2:32	3:32	4:32	5:32
1:30	1:31	2:30	3:30	4:30	5:30
1:28	1:29	2:28	3:28	4:28	5:28
1:26	1:27	2:26	3:26	4:26	5:26
1:24	1:25	2:24	3:24	4:24	5:24
1:22	1:23	2:22	3:22	4:22	5:22
1:20	1:21	2:20	3:20	4:20	5:20
1:18	1:19	2:18	3:18	4:18	5:18
1:16	1:17	2:16	3:16	4:16	5:16
1:14	1:15	2:14	3:14	4:14	5:14
1:12	1:13	2:12	3:12	4:12	5:12
1:10	1:11	2:10	3:10	4:10	5:10
1:08	1:09	2:08	3:08	4:08	5:08
1:06	1:07	2:06	3:06	4:06	5:06
1:04	1:05	2:04	3:04	4:04	5:04
1:02	1:03	2:02	3:02	4:02	5:02
1:00	1:01	2:00	3:00	4:00	5:00

ENTRANCE
REGISTRATION
Floorplan subject to change without notice.

SHOWCASE YOUR PRODUCTS & SERVICES

Secure your booth space in the Exposition

CALL:
(770) 279-4390 / (770) 279-4392

EMAIL:
patty@aeecenter.org
OR
ashley@aeecenter.org

WEB:
<http://www.aeecenter.org/EMC>

SHOWCASE

Presenting the latest products and services

Invitation: You are invited to visit the expo to see firsthand the latest technologies, products, and services available now that can improve productivity of your operations while slashing costs. The following list is a partial listing of exhibitors. *Note: This list is subject to change without notice and AEE is not responsible for omissions, errors, or claims regarding products or services listed.*

ALLIANCE TO SAVE ENERGY

The Alliance To Save Energy is a coalition of prominent business, government, environmental, and customer leaders who promote the efficient and clean use of energy.

ANAHEIM PUBLIC UTILITIES

As a community-owned utility, Anaheim Public Utilities is governed by a locally elected City Council. That 5-member body is responsible for determining policy for Anaheim Public Utilities, as well as citizen appointments to the 7-member Anaheim Public Utilities Board. The Board acts as an advisory panel to the City Council on utilities matters. The Public Utilities General Manager is responsible for all utility operations and reports to the City Manager.

APOC ROOFING SYSTEMS

With over 60 years' experience behind APOC and an eye to the future, Gardner-Gibson is the only manufacturer today who can supply premier category expansion products, offer a complete line of professional painters' caulks and a complete line of wall-covering adhesives. The company also offers a complete line of completely asbestos-free roofing cements, coatings, driveway sealers, reflective aluminum and white coatings including a complete system of elastomeric roof maintenance products. Additionally, the company provides superior point-of-sale merchandising, literature, and labels designed to provide the user with clear repair procedures and product selection criteria and designs customized programs tailored to the specific needs of your market. They deliver anywhere in the U.S. from strategically located manufacturing plants including port location.

APS ENERGY SERVICES

APS Energy Services is the full-service energy services provider and competitive electricity subsidiary of Pinnacle West Capital Corporation (NYSE: PNW), an Arizona-based company with consolidated assets of \$8.4 billion and annual revenues of \$2.6 billion. The company is part of a century-long legacy of providing power in the Southwest. In fact, as part of Pinnacle West's family of companies, energy customers benefit from cumulative knowledge and experience in energy usage, generation, transmission and distribution. The corporate goal is to provide innovative solutions that meet the challenges of the ever-changing energy market.



ASSOCIATION OF ENERGY ENGINEERS (AEE)

AEE is your gateway for information on the dynamic field of energy efficiency, energy services, deregulation, facility management, plant engineering, and environmental compliance. Entering its 28th year of serving its members, AEE is dedicated to remaining in the forefront of an ever-changing interrelated network of industries. With a full array of information oriented programs from technical seminars, conferences, books and journals, to critical buyer-seller networking trade shows, the Association offers a variety of information resource tools. As a growing membership organization, the overall strength of AEE is highlighted by a strong membership base of over 8,000 professionals and recognized certification programs, including Certified Energy Managers (CEMs), Lighting Professionals, Indoor Air Quality Professionals, and Cogeneration Professionals. The Association's network of 67 local and regional chapters has powerful grassroots agendas and members. Further, AEE's roster of corporate members is a veritable "Who's Who" of the commercial, industrial, institutional, governmental, energy services, and utility sectors.



BEST ROOFING & WATERPROOFING

Best Roofing provides and installs roof-mounted energy-saving systems including photovoltaic arrays, natural lighting systems, and Cool Roofs. Who better to install these products on your roof than a fully certified roofing contractor? Call Best Roofing with your requirements and for examples of complete projects. Best Roofing holds Cal. contractor licenses A, B, C-39.

BLUEPOINT ENERGY, INC.

BluePoint Energy, Inc. designs, assembles, and sells modular, completely packaged, plug-and-play combined heat and power (CHP) generation under the brand name Lean-One® CHP Module to utilities, energy service companies, and a wide range of commercial end users in need of reliable, efficient, ultra-clean, and cost-effective energy solutions.



CALIFORNIA ENERGY COMMISSION

The California Energy Commission has helped spur over \$400 million in international energy technology export sales for California companies. The program facilitates energy project development through its International Energy Fund and energy audits in Asia and Latin America. For up-to-date information, visit the Commission's website.

CALIFORNIA POWER PARTNERS, INC. (Calppwr)

Calppwr was formed in August of 2000 and incorporated in 2001 in the state of California in anticipation of numerous product and service marketing opportunities emerging from energy deregulation in the U.S. The basic tenet that organization was founded upon is summed up as "...the need to provide not just products to address onsite generation, but to provide well-engineered solutions and applications that will maximize the value of the generation asset." Shortly after the company was founded, Calppwr joined forces with World Energy Partners (WEP), under the Calppwr banner, offering increased market penetration and service.

CALIFORNIA MARITIME ACADEMY

The California Maritime Academy, a campus of the California State University system, has been providing professional training since 1929. The Academy's graduates are trained as facilities, marine, and mechanical engineers for the nation's facilities and marine-oriented industries and businesses.

CALMAC MANUFACTURING

CALMAC's IceBank Thermal Energy Storage system, also known as off-peak cooling, is the process of generating and storing cooling capacity at nighttime to reduce peak daytime kW demand, energy usage, and CO₂ emissions for hospitals, schools, commercial and retail applications, and new or retrofit buildings.



CATERPILLAR POWER GENERATION SYSTEMS (CPGS)

Caterpillar Power Generation Systems is an international marketing organization representing two established product brands for distributed generation applications—Solar® gas turbines and Caterpillar Motoren™ long-stroke, medium-speed reciprocating engines. With this broad portfolio of products, CPGS is able to offer its customers optimized solutions for combined heat and power (CHP), baseload, peaking, and mobile installations. To enhance customer value across the entire life cycle of the project, CPGS offers financing, EPC services, and a broad range of product support options.



CHEMWEEEK

Chemweek is the worldwide news source for chemicals makers and processors.



CHEMWORKS FILTRATION

Chemworks cooling tower filtration offers high-efficiency water filters that cut cooling system energy costs. The filters maximize chiller performance and provide a one-year payback. Other applications include closed loops, potable water, decorative fountains, pre-RO/DI, and wastewater.



COMPETITIVE ENERGY INSIGHT, INC. (CEI)

DC/CHP/ESCO projects are complex transactions that when oversimplified can only lead to missed opportunities and money left on the table. The company provides financial analysis, contract development, software, and consulting services for the DG/CHP/ESCO industries. CEI's unique financial model, Econ Expert-DTMT, will allow you to fully understand the economics of energy investments and to fully capture the value in those investments.



CONTROLOTRON

Controlotron's unique clamp-on, non-intrusive 1010E Energy Meters are ideally suited for energy distribution monitoring and the immediate analysis of energy efficiency with a real-time COP for HVAC systems. Real-time kW/BTU/h and kW/GPM uses Transit Time flow detection, precision-matched RTD's, zero drift temperature circuitry, specific heat values, built-in energy/BTU mode, and additional features of cavitation detection, pipe buildup, built-in mass function, dual path and dual channel modes, peak demand averaging, and multi-phase "Reflexor" mode to accommodate all your thermal energy metering and billing needs. See for yourself with live demos of Controlotron's new Energy/BTU Flow Measurement System. Rental and lease options are available.



LLUMAR

CPFILMS, INC.

Providing protection from premature fading, excessive heat gain, and glare, as well as helping to hold shattered glass in place. VISTA and LLUMAR window films are an excellent option for your windows. The films provide 99% ultraviolet rejection, and come with a manufacturer's warranty.



CUMMINS CAL PACIFIC LLC

Cummins Cal Pacific is the exclusive distributor for all products manufactured by Cummins Inc., a global power leader with annual sales of \$6 billion. Cummins Cal Pacific provides energy solutions through electrical power generation systems, engines, and related technologies, including air handling, filtration, and emissions controls. With seven branch locations serving Southern California and Baja Mexico, Cummins Cal Pacific generates over \$100 million per year in sales.



DEFENSE SUPPLY CENTER PHILADELPHIA

Defense Supply Center Philadelphia, the "Provider of Choice" for all lighting needs in the federal sector, offers a wide variety of commercial and weapons systems lighting products. The company also offers a full range of energy-efficient products such as compact fluorescent, high-pressure sodium, metal halide, and low-mercury lamps, as well as compatible fixtures that meet energy guidelines and environmental concerns.



DEUTZ CORPORATION

Engines, parts, and worldwide service are the hallmarks of Deutz Corporation. Get on-line technical support, GLOBAL contact and careers information, or look up your nearest authorized dealer. The staff of Deutz Corporation Sales, Aftermarket, Engineering, and Product Support promises that "We will provide fast, efficient support to our customers in a friendly and caring way, understanding that our products power their livelihoods. To strive to be best in class and to constantly improve our practices, in short, to treat our customers as we would wish to have ourselves and family members treated."

DTE Energy

DTE Energy Technologies



DTE ENERGY TECHNOLOGIES

DTE Energy Technologies' energy™ brand of onsite energy systems and services includes internal and external combustion engines, microturbines, fuel cells, commercial and residential

reciprocating engines, remote monitoring services, installation, maintenance, and applications engineering services. DTE Energy Technologies has 16 offices in North America and a worldwide distribution network.



E-MON, L.P., A HUNT POWER COMPANY

E-Mon, L.P., a Hunt Power Company, is the manufacturing leader in submeters and automatic meter reading equipment. E-Mon products are used worldwide to allocate utility costs across departments, predict maintenance needs, and control energy use. Customers include commercial office, residential, and retail properties, as well as industrial, government, and educational facilities.



EARTH PROTECTION SERVICES, INC. (EPSI)

Earth Protection Services, Inc. is a nationwide provider of recycling and proper disposition services for mercury-containing lamps, PCB lighting ballasts, computer components, and batteries. EPSI processes return recycled materials to reusable commodities while maintaining the highest level of professional standards and integrity, ensuring regulatory compliance and guaranteeing customer satisfaction.



ELONG INTERNATIONAL

Elong International is a leading manufacturer of compact fluorescent light bulbs in China and a partner of ENERGY STAR. Its patent design Top-Spiral CFLs improve light output and increase fixture efficiency. Using Top-Spiral inside, the company's Top-Flood is the brightest R30/R40 CFL floodlight in the world. The factory-direct model provides high-quality products at lowest prices.



EMC ENGINEERS, INC.

EMC Engineers, Inc. is a recognized leader in comprehensive facility engineering services. Since 1976, EMC has served numerous clients in industrial, commercial, institutional, and governmental venues. As a multi-disciplinary firm with strong professional roots in analysis and design of energy-efficient infrastructures, the company is positioned to help you address today's business concerns while anticipating the needs of continued growth and success that tomorrow will bring. While maintaining its primary commitment to energy engineering, EMC Engineers has developed strong credentials in mechanical, electrical, and control systems retrofit and modernization. The company's capability also includes civil and structural engineering, and architecture, thus providing the full spectrum of services you need as the owner or operator of facility and utility systems. EMC Engineers' quarter century of experience and its depth of expertise make the company an excellent choice to help you achieve your energy and environmental objectives.

ENERGY MARKETS

ENERGY MARKETS—HART PUBLICATIONS

Hart's Energy Markets provides global solutions for integrated energy executives with industry-leading editorial content and a worldwide subscriber base with audited circulation. The publication provides monthly access to your customers and prospects.

ENERGY USER NEWS

ENERGY USER NEWS

Energy User News is edited for professional energy managers and building owners. The publication's coverage includes all areas of facility management related to energy-intensive building systems and power acquisition.

ENERGY PROMOTION.NET

EnergyPromotion.net provides energy professionals with the most unique, up-to-date information products in the energy industry. This includes reports, analysis, newsletters, maps, and white papers. Visit the EnergyPromotion.net website to download over 60 FREE energy reports.

ENGINEERED SYSTEMS

Engineered Systems describes practical applications for the innovative HVAC mechanical systems engineer. With more than 57,500 subscribers, Engineered Systems has the largest circulation coverage of the HVAC engineering team: end users, consulting specifying engineers, and contractors.



FEIT ELECTRIC COMPANY

Feit Electric Company, one of the nation's premier light bulb companies, has always been known for its vast selection, superb service, excellent quality, and lowest prices in the industry. Feit Electric offers over 5,000 different varieties of light bulbs.



FHP MANUFACTURING

FHP offers commercial, residential, industrial, and institutional water source and geothermal package, split, counsel, rooftops, and water-to-heat pumps. Some models available with 410A refrigerant.



FLIR SYSTEMS

FLIR Systems, the global leader in infrared cameras, will exhibit two new handheld ThermoCAM IR cameras that are ideal for predictive maintenance: the ultra-lightweight E4 and the high-performance professional P60. Both are revolutionizing how infrared can help manage the reliability of electrical and mechanical equipment by finding faults before failures, outages, or even fires occur.



GAS TECHNOLOGY INSTITUTE (GTI)

GTI is the leading research, development, and training organi-

SHOWCASE

Presenting the latest products and services

zation serving energy and environmental markets. GTI is dedicated to meeting the nation's current and future energy needs and environmental challenges by developing solutions for consumers, industry, and government.

GE Energy



GE ENERGY, RENTAL OPERATIONS

GE Energy's rental operations offer portable generators, heating, and air conditioning units, cooling towers, chillers, and distribution equipment. Delivery, installation, and service are available. Call toll-free 1-877-PWR-RNT.

H.E. WILLIAMS, INC.

Williams—standard features that raise the standard. For those who view lighting as a meaningful component of architecture, Williams' products and services guarantee your success. The company treats its role in your project with a serious respect. From installation to project completion, Williams cares enough to care about the details—not because they have to, but because they choose to. Let Williams make A Visible Difference.

HAWTHORNE CAT POWER SYSTEMS

HAWTHORNE POWER SYSTEMS—PDS ENGINEERING
Hawthorne Power Systems, the authorized Caterpillar dealer located in San Diego, has been in the power generation business since 1972. PDS Engineering, a division of Hawthorne, has been providing engineering solutions to the energy industry since 1982. The combination of Hawthorne and PDS offers the energy industry complete solutions for power and cogeneration projects from 85 kW to over 100 MW.



HOWARD INDUSTRIES, INC.

Howard Ballast Division is a wholly owned subsidiary Howard Industries. The company is a leading supplier of ballast products in the U.S. Howard's product offerings include a wide variety of HID and fluorescent ballasts, the HEX ballast, the 4-lamp High Power ballast, and a comprehensive multi-volt product offering.



HVACR NEWS

HVACR News is a premier source for news, trends, developments, changes, events, and announcements in the heating, ventilating, air conditioning, and refrigerating industry and allied trades in the U.S.



KMC CONTROLS

KMC Controls is a worldwide manufacturer of controls systems and energy management for commercial, institutional, and industrial structures.



KOHLER POWER SYSTEMS

From distributed generation and load management to power quality for mission-critical applications, Kohler Power Systems is your single source for precision-engineered power systems, factory-trained professionals, and complete system solutions. Kohler is a provider of reliable power generation as well as switchgear, controls, transfer switches, and wireless monitors.



LAMAR LIGHTING COMPANY, INC.

Since 1957, LaMar has been an acknowledged leader and innovator in fluorescent lighting. Specializing in custom design, as well as offering a full line of standard fixtures, LaMar combines contemporary styling with cost-efficient solutions for your every application. LaMar fluorescents are being used everywhere...commercially in office buildings, hospitals, hotels, retail stores, shopping malls, trade shows, schools, and colleges...industrially in factories and warehouses...residentially in apartments and houses. Whatever your requests...replacement fixtures, hard-to-find items, new construction planning, energy analysis...LaMar's experienced lighting professionals are always ready to offer a full range of energy-saving ideas. The company's design specialists can help you decide what fixtures are appropriate for your needs. If it's off-the-shelf or custom-designed, LaMar can meet your specifications.



MADICO WINDOW FILMS

Madico has been developing innovative materials for over a century. An unrivaled commitment to research and development has enabled the company to pioneer a number of industry-first products and processes. Madico's cornerstone products are a suite of window films designed for virtually any application—view control, commercial and residential energy control, safety and security, and automotive. The company's corporate headquarters and manufacturing complex are located in Woburn, MA.

MOXA TECHNOLOGIES

All people at Moxa know their vision well, understand the mission of the company, and are dedicated to using their true Moxa Spirit to help ensure the company's success. The company believes that the culture that has grown up around this Moxa Spirit is unique to our company, and the fact that the company has its own well established culture has helped it overcome many unexpected obstacles. Let Moxa introduce you to a more personal side of our company: Our Vision, Our Mission, and our Moxa Spirit.



NOREN PRODUCTS, INC.

Noren manufactures air-to-air and air-to-water heat exchangers that remove heat from sealed electronic enclosures, panels, and

cabinets and are appropriate for indoor and outdoor applications. Units are 10 times more efficient than air conditioning and require no maintenance. NEMA 12 units are stock items. NEMA 4, 4X, and stainless steel units are also available, as well as UL, CSA, and CE. The company's computer program can determine your needs in minutes. Companies can save energy using the Noren Compact Cabinet Cooler. In addition, custom applications are available fast. Remember you do not have to refrigerate electronics.



NORTHERN POWER SYSTEMS

Northern Power Systems designs, builds, and installs ultra-reliable on-site power systems for commercial and industrial customers. Since 1974, Northern Power Systems has installed over 800 systems in 45 countries on all seven continents. With a record of success in traditional and emerging technologies, Northern's systems offer customers reduced operating expenses, minimized risk, and reduced pollution.



ONICON

ONICON's System-10 BTU meter provides the improved accuracy required to effectively trend energy use in hydronic HVAC systems and to report energy usage for cost allocation. The System-10 displays and reports energy rate and total, flow rate and total, and supply and return temperatures. The System-10 is RS485 compatible with JCI - N2 and LONWORKS protocols currently available with other protocols available soon.



PFG ENERGY CAPITAL GROUP

PFG specializes in flexible, creative, individualized financial solutions for all types of energy-related projects to corporations, federal, state, and local governments throughout the U.S. PFG are specialists at managing vendor financing and leasing programs for energy services companies, vendors of energy efficiency equipment, lighting, and HVAC mechanical contractors.



POLLUTION EQUIPMENT NEWS/RIMBACH PUBLISHING

Rimbach Publishing Company is publisher of industrial trade magazines, including *Pollution Equipment News* and *Industrial Hygiene News*. The magazines are designed to give its readers significant product information in the environmental, hazardous waste, wastewater, air pollution, water pollution, occupational health, industrial hygiene, and safety fields.

POWER EFFICIENCY CORPORATION

The Performance Controller is a new generation soft-start motor controller for AC induction motors for constant speed and variable load applications. Its unique technology reduces energy usage by automatically and continuously controlling the motor's magnetic field, resulting in energy savings up to 38%. It's true ramp-type soft start also optimizes motor drive systems by reducing inrush current up to 70% (80% for premium efficiency motors), resulting in lower motor operating temperature and emissions, stress upon driven components, improves contactor life, and extends motor life. The Performance Controller is available in both single-phase and three-phase, in sizes up to 250 horsepower. The Performance Controller is easy to install, reliable, and maintenance free.



POWERLIGHT CORPORATION

PowerLight Corporation is the nation's leading designer, manufacturer, and installer of grid-connected solar electric systems. Founded in 1991, PowerLight's distributed generation products produce reliable, affordable clean power for businesses and government agencies worldwide. *Inc.* magazine has ranked PowerLight Corporation among the top 500 fastest-growing privately held companies in 2000 and 2001. Today, PowerLight has worldwide offices and a full line of commercial solar electric products.

R.F. MACDONALD CO.

R.F. MacDonald Co. provides industrial and commercial boiler and pump sales and service. The company sells and services boilers, pumps, and meters from over 33 manufacturers, including Cleaver Brooks, Nebraska, Ajax, Fulton, and Lochinvar boilers, NAT-COM and Industrial Combustion Burners, Goulds, Blackmer, Warren Rupp, and Seepex pumps, and Schlumberger and Invensys meters. R.F. MacDonald Co. has been serving California and Nevada for over 40 years. During that time, we have been providing outstanding sales and service for a wide range of customers, just like you. The company's huge inventory, combined with its seven warehouse locations throughout California and Nevada, means that you will have fast, reliable service 24 hours a day, 365 days a year.



RETEC

ReTEC has developed small-scale 7.5kW and 15kW cogeneration systems that service residential and commercial applications. Our AvamGarde systems burn NG or LP to generate electricity and utilize thermal waste energy to heat indoor space, pools, domestic water, etc. Hot exhaust gas from the 15kW system supplies a 5-ton absorption chiller for air conditioning.



RWE SCHOTT SOLAR INC. (RSS)

RWE SCHOTT Solar Inc. is North America's leading manufacturer and distributor of solar power components and systems. RSS produces the largest solar power module available worldwide—the ASE 3008. A pioneer in the design and development of complete solar power solutions, RWE SCHOTT Solar Inc. serves a highly diverse market, including grid-connected residential and commercial systems and grid-independent agricultural, governmental, and utility applications.



SAFE-BIDCO

SAFE-BIDCO is a state program that provides loans to small business and nonprofit organizations in California. Up to \$350,000 in low-cost funding (4%) can be used to cover new or retrofit energy projects. Eligible measures include lighting, weatherization, HVAC system upgrades, cogeneration, and alternative energy systems.



SENSOR SWITCH, INC.

Sensor Switch, Inc. is a leader in manufacturing and technology development of passive infrared (PIR) and microphonic (PDT) occupancy sensors, daylight control devices, and facility monitoring systems. Sensor Switch, Inc. has the widest array of sensors offered by any manufacturer. The latest technology includes the patent pending Discriminator, Data Loggers, and High Bay Box sensors.



SEMpra Energy utilities

Southern California Gas Company (SoCalGas) and San Diego Gas & Electric (SDG&E) are separate companies. Each utility has a distinctive service area within the Southern California region.

SOUTHERN CALIFORNIA GAS COMPANY

Southern California Gas Company (SoCalGas) and San Diego Gas & Electric (SDG&E), are part of Sempra Energy Utilities, a subsidiary of Sempra Energy (NYSE: SRE), a Fortune 500 energy services holding company based in San Diego. SoCalGas is the nation's largest natural gas distribution utility, serving 18 million consumers through 5.2 million meters. The company's service area encompasses 23,000 square miles in most of central and southern California. SDG&E is an electric and natural gas utility providing service to 3 million consumers. SDG&E serves San Diego and southern Orange Counties, encompasses 4,100 square miles, covering two counties and 25 cities.

SPOT COOLERS

Spot Coolers, a MovinCool distributor, sells and rents portable air conditioning and heating 24 hours a day, 7 days a week to commercial/industrial users for hospitals, computer rooms, office buildings, and manufacturing facilities.

TECOGEN, INC.

Tecogen operates in the distributed generation market and is a leading manufacturer of reliable and efficient natural gas-fueled commercial and industrial cooling and cogeneration systems with heat recovery ability. The company's systems are located in over 1,500 installations and have delivered over 30 million hours of total service at customer sites across the U.S. and abroad. Tecogen's products are supported through its own network of field service and installation centers located throughout the U.S. Tecogen field technicians are exclusively dedicated to servicing and installing Tecogen equipment. All equipment is remotely monitored to insure 24/7 coverage. Through 20 years of development, testing, and commercial operation, Tecogen's proven equipment has demonstrated unmatched levels of reliability, efficiency, environmental emissions, and economic performance by any competing technology. The cogeneration units range from 60 kw to 75 kw and are typically bundled into multiple groups together. The cooling equipment ranges from 25 tons to 400 tons.



TRANE COMPANY

Trane is a worldwide provider of total comfort equipment and systems, providing indoor environmental solutions for new construction and existing buildings in the commercial, industrial, and residential building sectors.



U.S. DOE/FEDERAL ENERGY MANAGEMENT PROGRAM

The Federal Energy Management Program (FEMP) helps agencies reduce costs, increase energy efficiency, use renewable energy, and conserve water. FEMP's three primary areas of concentration are project financing; technical assistance, and planning, reporting, and evaluation. FEMP leads federal energy efficiency efforts and helps federal energy managers identify and procure products and implement projects. FEMP's mission is to reduce the cost of federal government by advancing energy efficiency and water conservation, promoting the use of distributed and renewable energy and improving utility management decisions at federal sites.



REBUILD AMERICA

U.S. DOE/EERE/BUILDING TECHNOLOGIES/

REBUILD AMERICA

Rebuild America is a network of hundreds of community-based partnerships across the nation dedicated to energy savings, improving building performance, easing air pollution through reduced energy demand, and enhancing the quality of life through energy efficiency and renewable energy technologies. The program serves as a tool for community revitalization and job creation in many U.S. communities.



U.S. EPA ENERGY STAR

ENERGY STAR is a dynamic government/industry voluntary partnership that offers businesses and consumer energy-efficient solutions that make it easy for them to save money and protect the environment. In addition to products, ENERGY STAR has expanded to cover homes and commercial and industrial facilities. Whether you're looking for energy-efficient products or to improve the efficiency of a building, ENERGY STAR can help. With ENERGY STAR, money isn't all you're saving. For more information, dial 1-888-STAR-YES or visit www.energystar.gov.

SHOWCASE

To exhibit at the show, call (770) 279-4390

UNI-SOLAR—UNITED SOLAR OVONIC

UNI-SOLAR offers a complete line of solar products that are lightweight, glass-free, flexible, durable, shadow-tolerant, have excellent high-temperature performance, and are easily installed. UNI-SOLAR PV products provide 20% more real energy* than crystalline panels of the same power (*Source: Solfest '98, "Module Shoot Out," June 20-21, 1998). The company's solar modules come with up to a 20-year warranty on power output, including power ratings from 3 to 128 watts and can be customized to fit virtually any need.

UNITED COATINGS

With over 80 years of manufacturing experience, United Coatings offers a full line of premium quality protective coatings for a wide range of architectural, industrial, and roofing applications. The company's product line includes systems for interior and exterior walls, potable water storage, waste/water treatment, secondary containment, interior and exterior pipe lining, and new or existing roofs.



UNIVERSAL LIGHTING TECHNOLOGIES

Universal Lighting Technologies manufactures a comprehensive line of high-quality, energy-saving lighting ballasts and controls for linear fluorescent, compact, HID, and sign applications.

UTC POWER

UTC Fuel Cells is the world leader in fuel cell production and development for commercial, transportation, residential, and space applications. UTC Fuel Cells is part of UTC Power, a unit of United Technologies Corp. (NYSE: UTX) focused on the market for distributed generation.



WARTSILA NORTH AMERICA, INC. (WNA)

Wartsila North America is part of Wartsila Corporation—the leading global ship power supplier, and a major provider of decentralized power generation solutions and supporting services. WNA provides complete turnkey gas- and oil-fired power plants from 5 to 300 MW, for intermediate peaking, cogeneration, or base-load power. "We make engines and sell power plants—it's that simple."



Waukesha

WAUKESHA ENGINES

Waukesha Engines, Dresser, Inc., is a worldwide manufacturer of natural gas engines offering a full line of gaseous-fueled engines ranging from 100-3000 kW. The company's Power Systems facility designs and builds customized engine/genera-

tor packages to meet most power generation and cogeneration applications. Together with its network of fully trained sales and service partners, Waukesha can provide full support worldwide.



WESTINGHOUSE

Westinghouse is the leader in providing the most comprehensive assortment of decorative electrical products under one corporate umbrella and provides many ENERGY STAR rated lighting products. Based in Philadelphia, PA, Westinghouse—through its many distribution and sales facilities—markets over 5,000 products, including light bulbs, ceiling fans and accessories, lighting fixtures, portable lamps, and decorative accessories.

WINDPOWER MONTHLY

As the world's leading news magazine exclusively devoted to wind energy, *Windpower Monthly* is a uniquely independent information source on the world's most successful renewable. Written for a sophisticated audience in clear everyday language, the publication features articles on political, industrial, environmental, and technical developments in the global wind energy arena.

Also exhibiting:

MEDITERRANEAN SOLAR
SAN DIEGO REGIONAL ENERGY OFFICE
SUPPORT PRODUCTS ENGINEERING

REGISTRATION

22nd West Coast Energy Management Congress

WEST COAST EMC WILL BE HELD AT:

Anaheim Convention Center, 800 W. Katella Avenue, Anaheim, CA

HOTEL RESERVATIONS

Room blocks have been reserved for Conference attendees at this hotel:

Anaheim Marriott Suites — \$135 single/double per night. The hotel will receive reservations by May 17, 2004. To make reservations call the hotel at (714) 750-1000. Be sure to mention that you are with AEE/WEST COAST EMC to receive the special group room rates.

PRE-REGISTRATION

1. BY MAIL (All Events): Complete the registration form below and return it with check or credit card number, expiration date, and signature to the address indicated. Be sure to indicate all portions of the program you wish to attend.

2. BY PHONE (All Events): For credit card payments only, you may register by phone by calling:

Conference: (770) 447-5083, Ext. 224 or 218
Seminars: (770) 925-9633

3. BY FAX (All Events): If you plan to pay by credit card, you may complete the registration form below, including all necessary credit card information, and transmit a completed registration form to the following FAX number: (770) 447-4354

Federal government agency participants registering by FAX must submit a

completed "Request, Authorization, Agreement, and Certification of Training" Form or completed DD1556 forms with completed registration form.

4. ONLINE (Conference and Expo only): For credit card payments only, you may register online at:

www.energyevent.com

Please note discount coupon in comments box and discount will be applied before your credit card is charged.

Your completed registration form, along with full payment, should be received no later than June 10, 2004 (to receive early registration discount). After that date, plan to register onsite at the Anaheim Convention Center. For questions regarding registration, call: (770) 447-5083, Extension 224 or 218

JOIN AEE AND SAVE ON YOUR REGISTRATION FEES

By completing the form, you can apply for membership in AEE and then qualify to take the member rates on all portions of the program for which you register. Membership benefits include discounts on continuing education programs and books, plus free subscriptions to *Energy Engineering*, *Strategic Planning for Energy* and the *Environment*, *Energy User News*, and *Energy Insight*.

REGISTRATION CANCELLATION POLICY

Adjusted refund of conference fee (less \$125 service charge) will be made if AEE Registrar is notified in writing on or before June 4, 2004. No refunds made after June 4, 2004. Substitutions may be made, but must be received in writing.

Should a program be cancelled because of weather, illness, or any other reason, all attendees will be notified as early as possible, and our liability will be limited to the return of the registration fee.

GROUP DISCOUNTS

(Applies to preregistration only. May not be combined with any other discount offer.) Registration will be processed at discounted rates ONLY if full payment accompanies the registration form at the left. Submit separate registration form for each delegate and mail together (use photocopies). Payment and names of all delegates must be received in AEE office by June 10, 2004.

TEAM DISCOUNT: SAVE \$100 PER DELEGATE

For two or more persons registering at the same time from the same company for the full 2-day conference, a \$100 discount may be deducted from registration fee. Discount applies only if names and fees are received by June 10, 2004. Separate registration must be completed for each person, and all registration forms must be mailed together along with full payment. (Does not apply to Company Plan or Seminar/Conference Package rates.)

COMPANY PLAN AND UTILITY-SPONSORED

CUSTOMER DISCOUNT PLAN

Companies and utilities may register up to 10 delegates for the 2-day conference and expo for a flat fee of \$4000. Submit registration form provided and attach complete list of delegate names. Final delegate list and full payment must be received no later than June 10, 2004.

22nd WEST COAST EMC CONFERENCE, SEMINAR, & EXHIBITS REGISTRATION FORM

PHOTOCOPIES OF THIS FORM MAY BE USED. Federal government employees must include DD1556 forms with registrations.

For Special Early Registration Discount, your completed registration form MUST BE RECEIVED NO LATER THAN JUNE 10, 2004. After that date, plan to register on site. Detach & mail completed registration form to: Registrar, AEE, 4025 Pleasantdale Road, Suite 420, Atlanta, GA 30340-4264 Or, if you are paying by credit card — Please FAX your typed, completed form to: (770) 447-4354

1 = Delegate Information

No one under 16 years of age admitted.

Name: Mr. Ms. LAST FIRST MI

Title _____

Name for Badge _____

AEE Member No. (if applicable) _____ (Must be provided if you are already a member and taking member rates.)

Company _____

Address _____

City/State/Zip _____

Phone (____) _____ FAX (____) _____

E-Mail Address _____

Please complete as part of registration:

1. TYPE OF FIRM/BUSINESS (Check only one):

- Commercial Institutional Government Consulting Engineer
 Industrial Construction/Architect Utility/Energy Producer Manufacturer/Vendor

2. OCCUPATION/TITLE (Check only one):

- Manager V.P., President, CEO Owner/Developer Plant Engineer/Facility Mgr.
 Engineer Consultant Sales/Marketing Educator/Researcher

2 = Free Registration: Expo Only

Check here to preregister for exhibits only. To receive free registration, you must mail or fax this form to reach us no later than June 10, 2004. (This saves you the \$40.00 admission at the door.) Please send "Attn: Dept. EO" or fax to (770) 447-4354.

3 = Free Seminar: Chilled Water Energy Efficiency

Check here to register for the "Chilled Water Energy Efficiency" seminar to be held Tuesday, June 15, 2004, from 1:00 pm to 4:00 pm.

AEE Membership Application (Optional)

I wish to become a member of the Association of Energy Engineers in the classification checked below:

MEMBER—A graduate of an engineering college or university or a registered professional engineer or architect. (Persons who believe they are qualified by experience or related degree may petition for full membership consideration.)

AFFILIATE MEMBER—A person interested in the objectives of the Association who does not meet the above criteria to be a full member.

If you are a registered Professional Engineer or Architect, please indicate state(s) and registration number(s):

State _____ No. _____ State _____ No. _____ Years of experience in energy field: _____

University _____ Degree _____ Year _____

Additional pertinent information may be listed on a separate sheet and attached.

I certify that the statements made in this application are correct and I agree, if elected, that I will be governed by the Constitution and Bylaws of the Association as long as I continue to be a member. I furthermore agree to promote the purposes of the Association so far as shall be in my power.

APPLICANT'S SIGNATURE (DATE)

Please choose one of the following AEE Membership categories:

- AEE Membership Only — Dues \$160
 AEE Membership plus Facility Managers Institute — Dues \$180
 AEE Membership plus Cogeneration & Competitive Power Institute — Dues \$180
 AEE Membership plus Environmental Engineers & Managers Institute — Dues \$180
 AEE Membership plus Energy Services Marketing Society — Dues \$180
 AEE Membership plus Security Managers Institute — Dues \$180

Appropriate membership fee must be included to your total registration payment for your application to be processed and to have the member price to apply to the registration for this program.

Program Options

Customize your training by preregistering for the events you wish to attend.

4 = Conference/June 16-17, 2004

Please fill in appropriate fee.

Conference registration entitles you to attend any of three conference tracks. Fee includes lunches June 16-17, copy of proceedings, and exhibit pass. (Single session serves as opening meeting for all conference tracks.)

INDIVIDUAL FEES:	
AEE MEMBER/GOVERNMENT*/NONPROFIT FEE — \$695	
NONMEMBER FEE — \$795	
SINGLE-DAY FEE: Specify <input type="checkbox"/> June 16 or <input type="checkbox"/> June 17 — \$400	\$ _____
GROUP DISCOUNTS (Applies to preregistration only)	
COMPANY PLAN (up to 10 delegates): AEE SUSTAINING MEMBER FIRM — \$3800	
NONMEMBER FIRM — \$4000	
Each additional delegate — \$380	\$ _____
OR	
TEAM DISCOUNT (save \$100 per delegate): Subtract \$100 for each registrant.	\$ _____
(Does not apply to Company Plan rates)	

Seminars—Separate Fees/ June 15-17, 2004

THREE-DAY SEMINARS: June 15-17, 2004

- The Theory and Practice of Distributed Generation & Onsite CHP* / 9:00 am - 5:00 pm
AEE MEMBER/GOVERNMENT/NONPROFIT FEE — \$1250
REGULAR FEE — \$1350

- Fundamentals of Lighting Efficiency* / 9:00 am - 5:00 pm
 Fundamentals of Measurement & Verification:
Applying the New IPMVP* / 9:00 am - 5:00 pm
AEE MEMBER/GOVERNMENT/NONPROFIT FEE — \$1050
REGULAR FEE — \$1150

ONE-DAY SEMINAR: June 15, 2004

- Creating a Strategic Energy Plan / 9:00 am - 5:00 pm FEE — \$480

*Note that registering for this seminar does not automatically register you for the exam. An additional fee of \$200 is required for the certification application and exam. Please contact AEE's Certification Administrator at (770) 447-5083, Ext. 224, or register on-line at www.aee.org/certification.

5 = Payment Information

Select method of payment:

- CHECK ENCLOSED (Payable in U.S. funds to Association of Energy Engineers)
 CHARGE TO MY CREDIT CARD (for advance registrations only)

- American Express VISA MasterCard Discover

CARD NO. _____

Expiration Date _____ Signature _____

TOTAL CONFERENCE & SEMINAR REGISTRATION FEES	\$ _____
DISCOUNT (IF APPLICABLE)	-\$ _____
MEMBERSHIP FEES (OPTIONAL)	\$ _____
TOTAL ENCLOSED	\$ _____

National Fuel Cell Research Center Tour — June 16, 2004

Check here to register for the National Fuel Cell Research Center Tour on Wednesday, June 16, from 2:45 pm to 5:00 pm. Attendance is limited to 50 people.

Do you require special accommodations for a disability to enable you to attend this meeting? Call the Association of Energy Engineers at (770) 447-5083, Extension 210 with your request.