

29th WEST COAST
EMC ENERGY MANAGEMENT CONGRESS
 JUNE 15-16, 2011 • LONG BEACH, CA
 Long Beach Convention Center

California Green

 Showcase with EMC
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SHOW NEWS
 FOR ENERGY PROFESSIONALS

Exploring California's Green Energy Revolution

WCEMC examines legal requirements, sustainability, and environmental realities



Focal point of energy innovation. California's Long Beach, site of the 29th West Coast Energy Management Congress, brings home the dynamic impact of emerging policies, the latest rulings, and the practical implications of the fast-paced events that are making energy the hottest commodity for industry and business in the years ahead.

The new era of clean energy is underway in California. Attendees at this year's West Coast Energy Management Congress (WCEMC), hosted by Southern California Edison, will gain the tools and strategies that will make them competitive as the "clean energy" marketplace explodes.

Making the Most of Renewable Energy

California law already requires utilities to get a fifth of their power from renewable energy. If the newly proposed bill is passed, utilities will have to get a third of their power from renewable energy sources. Supporters said the 33% target for renewables could put California ahead of the rest of the nation in green energy use. The state is also considering requiring California utilities to boost their use of wind, solar, and other renewable energy sources to a third of total supply by the year 2020. This year's WCEMC includes sessions addressing the first 200kW vertical axis wind turbine, Southern California Edison's Tehachapi wind project and solar program, and Renewable Funding's PACE Program.

Pathways to Net-Zero Energy and Green Buildings

Attendees will learn about CALGreen—the 2010 California Green Building Standards Code—and get a complete update on building efficiency codes. Kim Fowler, Chief Research Engineer at Pacific Northwest National Laboratory, will present an overview of what it means to get to zero and also provide direction as to the best Zero Net Energy Building Strategies. Conference delegates will also learn about new ways to green their businesses in a session entitled "Green Business Strategies." This session will feature speakers from Bowman Design Group, Lighting Design Alliance, Xeralux, and San Diego Gas & Electric.

Energy Efficiency and Sustainability

California continues to lead the nation in demonstrating leading-edge technologies for energy efficiency, distributed generation, and sustainability. WCEMC includes advanced building and design systems for building intelligence, advances in fuel cell technology, what's new in thermal energy storage, and creating sustainable commercial spaces of the future using lighting and daylighting. Southern California Edison will discuss their TRIO program, as well as how California utilities are implementing demand-side management. Case studies for demand response in sustainability will be presented by Doug Krauss, Environmental Programs Coordinator for the City of Hawthorne, Gary Nellesen, Director of Facilities Planning and Management for Mount San Antonio College, and Kate Meis, Director of Climate Change & Energy Programs at the Local Government Commission. Attendees will hear customer success stories of using energy efficiency programs successfully from Los Angeles County Sanitation District, The Irvine Company, Ventura Foods, and Nordstrom.

New Climate and Environmental Realities

A new track at WCEMC will focus on environmental considerations, behavioral changes, and new legislation. Southern California Edison will talk about water limitations and agricultural impacts and their Engage 360 plan. Nancy Whalen, Director of the North American Energy Efficiency Program at The Climate Registry, will present on "The Cool Planet Project," a program that encourages large industrial customers to install energy efficiency projects to reduce greenhouse gas emissions. Attendees will learn about the key to sustaining energy-efficient behavioral change, energy conservation ideas, and how to be an outlet for change. Legislation updates will be discussed, such as the AB32 Update, renewable requirements for legislation, and the energy storage bill.

Attending WCEMC Offers Major Benefits

This year's conference agenda comprises five conference tracks featuring expert speakers and a comprehensive expo showcasing the latest advances in technologies and services. Attendees are provided an unparalleled opportunity to network with their professional peers and noted experts in diverse fields of interest. Technology transfer is an automatic added value at the West Coast EMC conference.

Delegates will earn continuing education units (CEU) or professional development hours (PDH), which are recognized as meeting the requirements for Professional Engineers license renewal and may also be used for renewal of AEE certification. A popular addition to expo hall activities are free expo hall workshops available to all expo attendees and presenters. Nine seminars are being offered in conjunction with this year's EMC, all of which offer the opportunities for energy professionals to earn certification in significant areas of specialization. For more details on AEE's certification seminars visit:

www.aeeprograms.com/seminars

For conference information, call (770) 447-5083, Ext. 210 or visit: www.energyevent.com

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For a full list of sponsors, see page 4.



One-on-one technology transfer. WCEMC provides attendees with myriad opportunities to ask the experts for solutions that work.

EARN 0.8 CEU / 8 PDH FOR PROFESSIONAL LICENSES OR CERTIFICATION BY ATTENDING THE TWO-DAY CONFERENCE

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Association of Energy Engineers
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 Atlanta, GA 30349-4024

SCE Mobile Energy Unit at EMC

While at EMC, plan to visit Southern California Edison's (SCE) Mobile Energy Unit (MEU). The Mobile Energy Unit (MEU) is a mobile education center, which attends major events throughout SCE's service territory and promotes an energy efficiency "ethic" by increasing energy efficiency awareness and participation in SCE programs and services.



West Coast EMC's California Green Showcase



The California Green Showcase offers exciting opportunities for EMC attendees in the expanded expo area featuring green-specific sessions, workshops, and technologies

The U.S. Environmental Protection Agency ENERGY STAR® and the Association of Energy Engineers (AEE) invite you to participate in the California Green Showcase, prominently located within the West Coast EMC 2011 exhibit hall. The companies located along the "green carpet" of EMC's California Green Showcase will highlight their roles as the leading providers of environmentally friendly green energy efficiency products and services. The West Coast EMC conference program will also include a special series of presentations to educate and guide attendees as they seek the best and most promising green/sustainable solutions for improving building performance.

Show offers \$200 discount for early EMC registration

The Association of Energy Engineers, presenter of the 29th West Coast Energy Management Congress, has announced a V.I.P. conference discount offer of \$695 for registrations made prior to June 3, 2011. For registrations submitted prior to this deadline, attendees will save \$200 off the regular registration fee of \$895.

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 EMC 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 conference in 2011.

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

\$200 REGISTRATION DISCOUNT COUPON

Simply attach this coupon to your completed registration form and return with your payment prior to the registration deadline of June 3, 2011.

Visit www.energyevent.com and use the discount code EMCNEWS at checkout.

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FREE Exhibit Hall Workshops. This popular activity has been designed to enhance your learning and allow for an interactive experience for all expo attendees and presenters, including expo-only visitors, conference and seminar attendees.

OVERVIEW

Dynamic session kicks off this year's conference

Opening Session: A Greener Future/Wednesday, June 15, 2011/9:15 – 11:00 am

Chair: STUART R. HEMPHILL, Senior Vice President, Power Procurement, Southern California Edison

9:15-9:20 am

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



Thumann

9:20-9:30 am

Welcome from Host Sponsor, SCE
STUART R. HEMPHILL, Senior Vice
President, Power Procurement,
Southern California Edison



Hemphill

9:30-10:00 am

New Directions in Energy
RONALD L. LITZINGER,
President,
Southern California Edison



Litzinger

10:00-10:30 am

University's Sustainability Goals
FRED HARRIS,
Vice Chancellor,
California Community Colleges



Harris

10:30-11:00 am

Filling the Green Jobs Pipeline (Invited)
JANE OATES, Assistant Secretary
for Workforce Development,
U.S. Department of Labor



Oates

AT A GLANCE

Conference and seminar schedule overview

DAY ONE • WEDNESDAY, JUNE 15, 2011

Conference Opening Session: A Greener Future • 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: Smart Grid

SESSION 1A: 2:00–4:00 pm
WEDNESDAY, JUNE 15

Smart Meters

Track 2: New Climate and Environmental Realities

SESSION 2A: 2:00–4:00 pm
WEDNESDAY, JUNE 15

**Environmental
Considerations**

Track 3: Green Energy and Buildings

SESSION 3A: 2:00–4:00 pm
WEDNESDAY, JUNE 15

**Building Codes/
Standards**

Track 4: Making the Most of Renewable Energy Resources

SESSION 4A: 2:00–4:00 pm
WEDNESDAY, JUNE 15

Wind

Track 5: Integrated Demand Side Management

SESSION 5A: 2:00–4:00 pm
WEDNESDAY, JUNE 15

**Energy Efficiency
in Action**

DAY TWO • THURSDAY, JUNE 16, 2011

SESSION 1B: 9:00–11:00 am
THURSDAY, JUNE 16

**Electric
Vehicles**

SESSION 2B: 9:00–11:00 am
THURSDAY, JUNE 16

**Behavioral
Actions**

SESSION 3B: 9:00–11:00 am
THURSDAY, JUNE 16

**Building
Intelligence**

SESSION 4B: 9:00–11:00 am
THURSDAY, JUNE 16

Solar

SESSION 5B: 9:00–11:00 am
THURSDAY, JUNE 16

**Energy Efficiency/
Demand Response in
Sustainability**

Luncheon in Exhibit Hall for Conference Attendees • 12:00 noon
Exhibits Open • 10:00 am – 2:00 pm

SESSION 1C: 2:00–4:00 pm
THURSDAY, JUNE 16

**Zero Net
Energy**

SESSION 2C: 2:00–4:00 pm
THURSDAY, JUNE 16

**New
Legislation**

SESSION 3C: 2:00–4:00 pm
THURSDAY, JUNE 16

**Green Business
Strategies**

SESSION 4C: 2:00–4:00 pm
THURSDAY, JUNE 16

**Energy
Storage**

SESSION 5C: 2:00–4:00 pm
THURSDAY, JUNE 16

**Customer Success
Stories: Using EE and
Demand Response**

SEMINAR OFFERINGS:

In addition to the multi-track conference program at the West Coast EMC, AEE will present a variety of in-depth seminars to meet your training needs (*separate fees apply*). Visit www.energyevent.com/seminars for more details.

EARN 2.0 CEU OR 20 PDH / MONDAY-WEDNESDAY, JUNE 13-15, 2011

Fundamentals of Building Energy Simulation

Preparatory course for BESA certification

EARN 2.0 CEU OR 20 PDH / MONDAY-WEDNESDAY, JUNE 13-15, 2011

Fundamentals of Using RETScreen® Tools for Energy Project Analysis

Preparatory course for CRU certification

EARN 2.0 CEU OR 20 PDH / MONDAY-WEDNESDAY, JUNE 13-15, 2011

Fundamentals of Buying and Selling Energy

Preparatory course for CEP certification

EARN 2.4 CEU OR 24 PDH / MONDAY-WEDNESDAY, JUNE 13-15, 2011

Fundamentals of Energy Auditing

Preparatory course for CEA certification

EARN 2.4 CEU OR 24 PDH / MONDAY-WEDNESDAY, JUNE 13-15, 2011

Fundamentals of Renewable Energy: Technologies, Applications, Strategies

Preparatory course for REP certification

EARN 2.0 CEU OR 20 PDH / TUESDAY-THURSDAY, JUNE 14-16, 2011

Fundamentals of Building Commissioning

Preparatory course for CBCP certification

EARN 2.0 CEU OR 20 PDH / TUESDAY-THURSDAY, JUNE 14-16, 2011

Fundamentals of Lighting Efficiency

Preparatory course for CLEP certification

EARN 2.0 CEU OR 20 PDH / TUESDAY-THURSDAY, JUNE 14-16, 2011

Fundamentals of Measurement and Verification: Applying the IPMVP

Preparatory course for CMVP certification

EARN 2.4 CEU OR 24 PDH / TUESDAY-THURSDAY, JUNE 14-16, 2011

Fundamentals of High Performance Building Design and Engineering

Preparatory course for HPB certification

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This newsprint is made from 100% recycled material.

PROGRAM

The latest information for energy professionals

Track 1: Smart Grid

SESSION 1A:

WEDNESDAY, JUNE 15 • 2:00–4:00 pm
Smart Meters

Chair: Southern California Edison

2:00-2:30 pm

Edison Smart Connect: Overview
Southern California Edison

2:30-3:00 pm

Smart Appliances
WARWICK STERLING, Global Director of Energy & Sustainability, Whirlpool

3:00-3:30 pm

Edison Smart Connect: Technology Enabled Applications
Southern California Edison

3:30-4:00 pm

Institute for Electric Efficiency
LISA WOOD, Executive Director, Institute for Electric Efficiency

SESSION 1B:

THURSDAY, JUNE 16 • 9:00–11:00 am
Electric Vehicles

Chair: ALICIA REICH, EIT, Associate Energy Engineer, CLEARResult

9:00-9:30 am

Plug-In Electric Vehicle Readiness

ED KJAER, Director, Electric Transportation,
Southern California Edison

9:30-10:00 am

Impacts on the Grid

Southern California Edison

10:00-10:30 am

Efficient Automotive Incentives

ALICIA REICH, EIT, Associate Energy Engineer, CLEARResult

10:30-11:00 am

Establishing a Regional Coalition to Enable the Region to Become PEV Ready

ROBERT GRAHAM, Manager, Plug-in Vehicle Readiness,
Southern California Edison

SESSION 1C:

THURSDAY, JUNE 16 • 2:00–4:00 pm
Zero Net Energy

Chair: PETER W. TURNBULL, Principal, Commercial Buildings, IDSM Products, Zero Net Energy Program, Pacific Gas & Electric Company

2:00-3:00 pm

Zero Net Strategies

KIM FOWLER, LEED AP, Chief Research Engineer,
Pacific Northwest National Laboratory

3:00-3:30 pm

PG&E's Zero Net Energy Pilot Program

PETER W. TURNBULL, Principal, Commercial Buildings, IDSM Products, Zero Net Energy Program, Pacific Gas & Electric Company

3:30-4:00 pm

Zero Net Energy from a Local Utility Perspective

MIKE KEESEE, Project Manager, Energy Efficiency Customer R&D,
Sacramento Municipal Utility District

Track 2: New Climate and Environmental Realities

SESSION 2A:

WEDNESDAY, JUNE 15 • 2:00–4:00 pm
Environmental Considerations

Chair: RON JENSEN, Manager, Southern California Edison

2:00-2:30 pm

Water Limitations and Impacts on Agriculture

ROBERT FARBER, Ph.D., Technical Specialist,
Southern California Edison

2:30-3:00 pm

Implications of Once Thru Cooling

DAVID ASTI, Manager of Corporate Environmental Policy,
Southern California Edison

3:00-3:30 pm

Renewable Impacts

TINA TAYLOR, Director of Environment,
Electric Power Research Institute

3:30-4:00 pm

The Cool Planet Project

NANCY WHALEN, Director, North American Energy Efficiency Program, The Climate Registry

SESSION 2B:

THURSDAY, JUNE 16 • 9:00–11:00 am
Behavioral Actions

Chair: Southern California Edison

9:00-9:30 am

ENGAGE 360

Southern California Edison

9:30-10:00 am

Awareness IDEAS and Energy Conservation

MARVIN WEISENTHAL, President,
FLEXI Display Marketing, Inc.

10:00-10:30 am

The Key to Sustaining Energy Efficient Behavioral Change

NICK BLANDFORD, BA Econ, MSc, Global Marketing,
Schneider Electric

10:30-11:00 am

Phantom Load—Be An Outlet for Change

STEVE GALANTER, Manager, Strategic Planning & Technical Services Energy Efficiency Division, Southern California Edison

SESSION 2C:

THURSDAY, JUNE 16 • 2:00–4:00 pm
New Legislation

Chair: Southern California Edison

2:00-2:30 pm

Energy Storage Bill

JANICE LIN, Managing Partner, Strategen Consulting, LLC, and Co-Founder & Director, California Energy Storage Alliance

2:30-3:00 pm

Renewable Requirements

LAURA GENAO, Manager Regulatory and Legislative Matters,
Southern California Edison

3:00-3:30 pm

AB32 Update

3:30-4:00 pm

FERC (Impacts on CA Legislation)

Track 3: Green Energy and Buildings

SESSION 3A:

WEDNESDAY, JUNE 15 • 2:00–4:00 pm
Building Codes/Standards

Chair: ARUN JHAVERI, Ph.D., C.S.D.P., Senior Advisor/
Consultant, Arun Jhaveri & Associates

2:00-3:00 pm

CALGreen: The New 2010 California Green Buildings Standards Code

CYNTHIA BIEDERMANN, AGPA, Education and Outreach,
California Building Standards Commission

3:00-3:30 pm

Building Efficiency Standards Update

MAZIAR SHIRAKH, Lead, Building Energy Efficiency Standards,
California Energy Commission

3:30-4:00 pm

New Legislation for the Training of Federal Buildings Personnel vis-à-vis Better Buildings Initiative

ARUN JHAVERI, Ph.D., C.S.D.P., Senior Advisor/
Consultant, Arun Jhaveri & Associates

SESSION 3B:

THURSDAY, JUNE 16 • 9:00–11:00 am
Building Intelligence

Chair: JON R. HAVILAND, P.E., C.E.M., G.B.E.,
Assistant Vice President, Marx/Okubo Associates

9:00-9:30 am

Listening to the Overlooked Intelligence: What Utility Bills Can Tell You

JOHN AVINA, President, Abraxas Energy Consulting

9:30-10:00 am

Piloting Energy Management Systems

DRESDEN SKEES-GREGORY, Principal & CEO, Sustainable Environmental Services Corporation, and JOHN WALLNER, Industrial Sector Manager, Northwest Energy Efficiency Alliance

10:00-10:30 am

Building Design and Systems

DANE R. TAIVAL, Vice President, Ingersoll Rand

10:30-11:00 am

Advanced Lighting Controls

DOUGLAS AVERY, Technical Specialist, Project Manager,
Southern California Edison

SESSION 3C:

THURSDAY, JUNE 16 • 2:00–4:00 pm
Green Business Strategies

Chair: ERIC R. WOODROOF, Ph.D., C.E.M., C.R.M., President AEE,
Founder—www.ProfitableGreenSolutions.com

2:00-2:30 pm

Efficiency, Carbon Abatement and Improving the Bottom Line: A Case Study of Award-Winning Results

TOM BOWMAN, President, Bowman Design Group

2:30-3:00 pm

Lighting and Daylighting: Energy Efficiency and Creating Sustainable Commercial Spaces of the Future

CHIP ISRAEL, FIALD, LEED AP, LC, Pres., Lighting Design Alliance

3:00-3:30 pm

Sustainable Outdoor Lighting

JAY SCHULER, Vice President of Marketing, Xeralux

3:30-4:00 pm

Sustainable Construction: Non-Profits Can Do It, Learn How You Can Too!

SALLY MUIR, LEED AP, Project Manager, Sustainable Communities Program, San Diego Gas & Electric

Track 4: Making the Most of Renewable Energy Resources

SESSION 4A:

WEDNESDAY, JUNE 15 • 2:00–4:00 pm
Wind

Chair: RICHARD J. COSTELLO, P.E., M.S.E.M., B.S.M.E., C.E.M.,
President, Acela Energy Group, Inc.

2:00-2:30 pm

First 200kW Vertical Axis Wind Turbine—Ishpeming, Michigan

RICHARD J. COSTELLO, P.E., M.S.E.M., B.S.M.E., C.E.M.,
President, Acela Energy Group, Inc.

2:30-3:00 pm

The Tehachapi Project

JUAN CASTANEDA, Senior Electrical Engineer,
Southern California Edison

3:00-3:30 pm

Wind and Load Following Challenges

RANDY MINNIER, CEO & Principal, MPE Consulting, Inc.

SESSION 4B:

THURSDAY, JUNE 16 • 9:00–11:00 am
Solar

Chair: PHILIP W. Le GRAND, C.E.M., B.E.P., C.E.P., C.D.S.M.,
C.S.D.P., Senior Account Manager, Southern California Edison

9:00-9:30 am

SCE Solar Program: Rooftops and Power Contracts

GARY BARSLEY, Manager of Solar Initiatives,
Southern California Edison

9:30-10:00 am

PACE Program

CISCO DeVRIES, President, Renewable Funding, Inc.

10:00-10:30 am

West Coast Solar Economics: What is Driving Projects in Your Area?

CHRIS HILLER, Solar Analyst, Stellar Energy GP, Inc.

10:30-11:00 am

CSI and SGIP Program Updates

GARY BARSLEY, Manager of Solar Initiatives,
Southern California Edison

SESSION 4C:

THURSDAY, JUNE 16 • 2:00–4:00 pm
Energy Storage

Chair: CHRISTOPHER KUHL, Sales Application Engineer/
Account Manager, ZBB Energy Corporation

2:00-2:30 pm

Bulk Power Storage in the Tehachapi Wind Project

MICHAEL R. MONTOYA, Director, Grid Advancement,
Southern California Edison

2:30-3:00 pm

An Intelligent Platform for the Integration of Energy Storage and Distributed Generation Services

CHRISTOPHER KUHL, Sales Application Engineer/ Account Manager, ZBB Energy Corporation

3:00-3:30 pm

Fuel Cell Technology

RICHARD SHAW, Regional Sales Manager, UTC Power

3:30-4:00 pm

Thermal Energy Storage

TERRY ANDREWS, Western Regional Sales Manager,
Calmac Manufacturing Company

Track 5: Integrated Demand Side Management

SESSION 5A:

WEDNESDAY, JUNE 15 • 2:00–4:00 pm
Energy Efficiency in Action

Chair: LAURIE WIEGAND-JACKSON, C.E.P., President,
North America Power Partners, LLC

2:00-2:30 pm

Incubating Innovators: TRIO Program

ROBYN ZANDER, Solicitations and Contract Support,
Southern California Edison

2:30-3:00 pm

Demand Response and TATI Programs

ERIK OH, Regional Sales Mgr., North America Power Partners, LLC

3:00-3:30 pm

How California Utilities are Implementing Demand Side Management

MARK S. MARTINEZ, Manager of Technical Services,
Southern California Edison

3:30-4:00 pm

Integration of Energy Efficiency into Non-Residential Portfolio

KIM RODRIGUEZ, Manager, Southern California Edison

SESSION 5B:

THURSDAY, JUNE 16 • 9:00–11:00 am
Energy Efficiency/Demand Response in Sustainability

Chair: STEVE SULLIVAN, Director of Government and Institutions,
Southern California Edison

9:00-9:30 am

City of Hawthorne

DOUG KRAUSS, Environmental Programs Coordinator, City of Hawthorne

9:30-10:00 am

Mount San Antonio College

GARY NELLESEN, Director of Facilities Planning & Management,
Mount San Antonio College

10:00-10:30 am

Demand Response and LEED Certification

PETER WEIGAND, Chairman & CEO, Skipping Stone

10:30-11:00 am

Statewide Energy Efficiency Collaborative

KATE MEIS, Director, Climate Change & Energy Programs, Local Government Commission, and MONICA GILCHRIST, Local Governments for Sustainability (ICLEI), and YVONNE HUNTER, Program Director, California Climate Action Network, Institute for Local Government

SESSION 5C:

THURSDAY, JUNE 16 • 2:00–4:00 pm
Customer Success Stories—How to Use Energy Efficiency & Demand Response Programs Successfully

Chair: JANET PASKER, Director Commercial Segment,
Southern California Edison

2:00-2:30 pm

A Megawatt Saved is \$1 Million Earned: LA County Sanitation Districts Energy Efficiency Management Program

ANDRE SCHMIDT, P.E., Senior Engineer, Energy Recovery Engineering Section, Los Angeles County Sanitation District

2:30-3:00 pm

Customer Success Story—Nordstrom

KELI STOSICH, Energy Manager & Facilities Analyst, Nordstrom

3:00-3:30 pm

The Irvine Company

CHRIS MORRIS, Commercial Real Estate Leader, The Irvine Co.

3:30-4:00 pm

Industrial Customer Success Story

TOM ROCHESTER, Engineering Manager, Ventura Foods

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ABOUT THE SHOW HOST:



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Southern California Edison (SCE)

Southern California Edison (SCE) is one of the nation's largest investor-owned electric utilities, serving nearly 14 million people in 15 counties of Central, Coastal, and Southern California. Based in Rosemead, CA, the utility has been providing electric service in the region for more than 120 years. SCE is a subsidiary of Edison International, which also is headquartered in Rosemead. As the nation's leading purchaser of renewable energy, SCE delivered 13.6 billion kilowatt-hours of renewable energy to its customers in 2009—17% of the total energy delivered to its customers. This energy comes from such renewable sources as wind, solar, biomass, geothermal, and small hydroelectric. Over the last five years, SCE customers have saved 7.8 billion kilowatt-hours of electricity through SCE's energy-efficiency programs and services—enough to power 1.1 million average Southern California homes for an entire year. During that five-year period, SCE's partnership with its customers reduced greenhouse gas emissions by nearly 3.6 million metric tons—the equivalent of removing 680,000 cars from the road.

BRONZE SPONSORS:



Southern California Gas Company

Southern California Gas Company has been delivering clean, safe, and reliable natural gas to its customers for more than 140 years. It is the nation's largest natural gas distribution utility, providing safe and reliable energy to 20.3 million consumers through 5.8 million meters in

more than 500 communities. The company's service territory encompasses approximately 20,000 square miles in diverse terrain throughout central and Southern California, from Visalia to the Mexican border. Southern California Gas Company is a regulated subsidiary of Sempra Energy (NYSE: SRE). Sempra Energy, based in San Diego, California, is a Fortune 500 energy services holding company.



North American Power Partners

North America Power Partners is a full-service Demand Response Provider. North America Power Partners will represent and manage a facility's strategic assets in the wholesale electric markets and state programs.

CALIFORNIA GREEN SPONSOR:



U.S. EPA ENERGY STAR Program

U.S. EPA ENERGY STAR Program is a dynamic government/industry voluntary partnership that offers business 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.

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Western Energy Systems/ GE Jenbacher/Capstone Turbine

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gas engine systems throughout the northeastern U.S., California, Oregon, Alaska, Hawaii, and the Caribbean region. Focused exclusively on gaseous fueled engine and power generation systems, both Northeast Energy Systems and Western Energy Systems provide comprehensive application, sales engineering, systems integration, and parts and service capabilities. As part of the Penn DDA/Penn Power Systems organization, both companies bring over 50 years' experience in reciprocating engine power applications.

NEW TECHNOLOGIES BREAKFAST SPONSOR:



Leviton Manufacturing Company

Founded in 1906, Leviton is a leading global manufacturer of lighting and energy management systems, electrical wiring devices, and data center connectivity solutions. Leviton Manufacturing Company offers the most comprehensive line of energy management products to help you save energy, meet code compliance, and achieve LEED certification with our occupancy sensors, wireless self-powered controls, relay controls, commercial grade submetering, and more.

LANYARD SPONSOR:



Sensor Switch, Inc.

Sensor Switch is an industry leader in developing and manufacturing Occupancy Sensor Products and Technology for Lighting Control. Our years of experience and wide breadth of sensor and photocell daylight control products ensure we can provide a reliable solution for any application or building type. Schools, warehouses, factories, offices, government buildings, retail stores—you name it, we've sensed it! And while the industry struggles to catch up, Sensor Switch keeps moving further ahead by introducing new products and technologies.

SEMINARS

Certification seminars highlight show offerings

Fundamentals of Building Energy Simulation

3-day seminar / Prep course for the BESA exam / June 13-15, 2011 / BESA exam—June 15, 2011
9:00 am - 5:00 pm / Earns 2.0 CEU or 20 PDH / Seminar held at Long Beach Convention Center

About the seminar: This three day instructional program has been designed to provide the specific training and background needed by professionals preparing to sit for AEE's Building Energy Simulation Analyst (BESA) certification examination. Attendees will gain a clear, in-depth understanding of the theory and practice of computerized building energy modeling and will also have the opportunity for hands-on building simulation experience during the seminar.

Important: Seminar attendees should bring laptop computers to this seminar and should download prior to the course date the latest free eQUEST simulation software available at doe2.com/equest/ for use during instruction.

An increasing number of federal and state laws, as well as professional energy standards, protocols, and rating systems are requiring the use of computerized building energy simulation programs to verify energy and dollar savings for both high-performance new facility design projects and existing building retrofits. In addition, organizations investing in efficient building projects have learned the value of advance energy modeling as an effective tool assuring the future value of their investments.

The knowledge you will gain by participating in this training program—as well as achievement of the status of Certified Building Energy Simulation Analyst—will position you to be among the select group of professionals available to meet this growing demand for effectively administered computerized building energy simulation, either for your own organization's projects or for those of your clients.

For those wishing to qualify for BESA certification, the exam will be administered at the close of instruction on the last day of the seminar. To sit for the exam, you must submit a BESA application, which can be obtained at www.aeecenter.org/certification/besa. Note: registering for the seminar does not automatically register you for the BESA

exam. An added fee of \$300 is required for the application and exam.

Seminar Outline: Major areas covered by this seminar:

DAY 1: (Day 1 is presented by IBPSA-USA) *The Building Energy Modeling Workshop is not a required component of training for BESA candidates, but is incorporated into this seminar as a valuable hands-on training experience to facilitate effective delivery of energy modeling services.*

Building Energy Modeling Workshop

The main objective of this workshop is to improve modeling quality. Training focuses on topics critical to the effective delivery of energy modeling services.

DAY 2: (Day 2 and 3 are presented by Chris Balbach)

Building Energy Simulation Using Software, Inputs, Results

Walk-Through of an Example Energy Simulation Process Using

eQUEST Simulation Software

- Develop title/purpose/scope
- Strategizing to create a baseline model of appropriate granularity to reflect ECM's to investigate:
 - Building the energy model
 - Compare results to existing utility bills
 - Interpreting simulation results
 - Hand calculations, compare results to rules of thumb, etc.
 - Analyzing and proposing improvements and packages of ECMs
 - Performing economic analysis: utility rates, LCC, payback analysis

DAY 3: (Morning)

Advanced Building Energy Simulation

- Course wrap-up and test preparation
- Differences between energy estimating method
- Software tool demonstrations
- Inverse modeling techniques
- Extracting valuable information from utility bills
- STEM (Short-Term-Energy-Monitoring), blink test techniques
- Emerging technologies



Building Energy Simulation Analyst
For more information, visit:
www.aeecenter.org/certification/besa

About the Instructors:

The Day 1 Workshop will be presented by a team of instructors from IBPSA-USA. IBPSA-USA is the U.S. regional affiliate of the International Building Performance Simulation Association (IBPSA).

CHRIS BALBACH, P.E., C.E.M., C.M.V.P., B.E.M.P., LEED AP, brings to this seminar extensive expertise in building simulation and energy modeling, with a focus on existing buildings. As Vice President of R&D for Performance Systems Development of NY, LLC, he acts as a subject matter expert to guide internal software development teams. As a subcontractor to the National Renewable Energy Lab (NREL), he has delivered weeklong comprehensive Energy Assessment trainings that include energy modeling to governmental clients worldwide. He is a member of IBPSA, AEE, and ASHRAE, and serves as programs committee chair of ASHRAE TC4.7 (Energy Calculations).

Fees for three-day seminar only:

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



Balbach

American Institute of Architects (AIA) Continuing Education Systems (CES) Approved Training Course

Fundamentals of Energy Auditing

3-day seminar / Prep course for the CEA exam / June 13-15, 2011 / CEA exam—June 16, 2011
9:00 am - 5:00 pm / Earns 2.4 CEU or 24 PDH / Seminar held at Long Beach Convention Center

About the seminar: This three day program is designed to provide the specific training needed by professionals preparing to sit for AEE's Certified Energy Auditor (CEA) exam. You'll gain the fundamental knowledge needed to evaluate how energy is being used in a facility and to identify where consumption can be reduced, covering useful calculation methods and practical examples. The instructor will emphasize effective auditing basics, putting them in the context of the "big picture" and the bottom line. The program is also designed to provide you with the opportunity to take part in a focused, fast-paced instructional program to both expand your knowledge in the field and to serve as a preparatory vehicle for the exam required to achieve AEE's CEA certification.

For those wishing to qualify for the CEA certification examination, it will be administered on the morning of the day following the seminar. In order to sit for the exam, it is necessary to submit a CEA application, which can be obtained at www.aeecenter.org/certification/cea. Note that registering for the three day seminar does not automatically register you for the CEA exam. An additional fee of \$300 is required for the certification application and exam.

Seminar Outline. Major areas covered by this seminar:

Introduction to Energy Auditing Building Envelope

- Heat flow concept, R and U values
- Walls, roofs, windows, low E glass
- Infiltration, energy management opportunities

Lighting Systems

- Measurement of light/energy/efficacy/light color-CCT/CRI
- Lamp lumen depreciation
- Lamp types and characteristics/controls
- Energy management opportunities

Air Conditioning Systems

- HVAC basics/load estimating/efficiencies
- Components/chillers—electric, gas-driven, absorbers
- Piping arrangements/energy saving opportunities

Heating Systems

- Boilers: fire tube, water tube, cast iron
- Distribution systems and thermal units
- Boiler energy management opportunities
- Furnaces—electric, gas, pulse, condensing
- Furnace energy management opportunities

Motors and Drives

- Types of motors/squirrel cage induction motors
- Operating characteristics/efficiencies
- Variable frequency drives
- Energy management opportunities

Heat Pumps

- Operation/efficiencies
- Classifications
- Energy management opportunities

Ventilation Systems

- Types/characteristics
- Heat recovery methods
- Energy management opportunities

Domestic Hot Water Systems

- Types/efficiencies/circulating pumps
- Heat pump water heaters

Water Conservation and Audits

- Rate structures/water conservation methods
- Irrigation and landscaping/leak detection, water audit

Utility Analysis



Certified Energy Auditor
For more information, visit:
www.aeecenter.org/certification/cea

- Demand and energy/rates classifications
- Identifying billing errors, energy accounting

About the Instructor:

TERRY NIEHUS, P.E., C.E.M., is the founder of Lakeshore Consulting, a firm specializing in technical training and energy auditing. Mr. Niehus has extensive experience as a trainer, having taught courses on a broad spectrum of topics in addition to energy auditing, including commercial building energy systems, motors and drives, HVAC, compressed air, cogeneration, and thermal energy storage. He has also authored training and technical resources manuals in areas related to his training programs. As a consultant, he has performed over 1,000 energy analyses for governmental, commercial, and industrial facilities.

Fees for seminar only:

Regular fee: \$1450; AEE member fee: \$1350; government and nonprofit fee: \$1350; team discount, deduct \$100 per registrant.



Niehus

EDUCATION PROVIDER This program is a U.S. Green Building Council (USGBC) Education Provider Approved Certification Course

American Institute of Architects (AIA) Continuing Education Systems (CES) Approved Training Course

SEMINARS

Choose from energy and commissioning seminars

Fundamentals of Renewable Energy: Technologies, Applications, Strategies

3-day seminar / Prep course for the REP exam / June 13-15, 2011 / REP exam—June 16, 2011

9:00 am – 5:00 pm / Earns 2.4 CEU or 24 PDH / Seminar held at Long Beach Convention Center

About the seminar: This program is designed to provide the specific training needed by professionals preparing to sit for AEE's Renewable Energy Professional (REP) certification exam. The program provides an in-depth overview of alternative energy sources, application technologies, renewable energy project goal-setting, and implementation strategies. Topics include wind power systems, solar thermal heating and photovoltaic generation, geothermal heating and electrical production, biofuels, waste-to-energy systems, energy storage, fuel cells, and hydroelectric power. Financing options and incentives are also considered.

For those wishing to qualify for the REP certification exam, it will be administered on the morning of the day following the seminar. In order to sit for the exam, it is necessary to submit a REP application, which can be obtained at www.aeecenter.org/certification/rep. Note that registering for the 3-day seminar does not automatically register you for the REP exam. An additional fee of \$300 is required for the certification application and exam.

Seminar Outline: Major areas covered by this seminar:

- Introduction to Alternative Energy
- Environmental Impacts—A Driver for Using Alternative Energy
- Alternative Energy and Carbon Reduction
- Solar Energy
- Wind Energy
- Hydropower

- Geothermal Energy
- Waste-to-Energy Systems
- Fuel Cells—An Example of Hydrogen Applications
- Hybrid Alternative Energy Systems
- Creative Energy Storage Applications
- Alternative Energy Strategies for Buildings
- Transportation Systems
- Governmental Alternative Energy Programs
- Financial Approaches and Incentives for Alternative Energy

About the Instructors:

STEPHEN A. ROOSA, Ph.D., an internationally recognized expert in energy management and urban sustainability, brings to this program over 25 years' experience in commercial energy management and performance contracting. Dr. Roosa is a C.S.D.P., C.E.M., C.I.A.Q.P., C.M.V.P., B.E.P., Certified Energy Monitoring and Control System Designer, Certified Demand Side Management Specialist, and a LEED Accredited Professional. He holds a Ph.D. in Planning and Urban Development.

FRED HAUBER is an electrical engineer, lighting system designer, and solar integrator with over 35 years' field experience. He has served as a facilities manager for several large corporations and is intimately familiar with sustainable operation and maintenance of large facilities. He has lectured and written widely in the area of sustainability techniques for commercial facilities and solar electric

REP Certified Renewable Energy Professional
For more information, visit:
www.aeecenter.org/certification/rep

systems design and installation. He is a Certified Lighting Management Consultant, C.L.E.P., Certified Solar System Designer, and Certified Solar Installer.

Fees for seminar only:

Regular fee: \$1450; AEE member fee: \$1350; government and nonprofit fee: \$1350; team discount, deduct \$100 per registrant.



Roosa



Hauber



This program is a U.S. Green Building Council (USGBC) Education Provider Approved Certification Course



American Institute of Architects (AIA)/Continuing Education Systems (CES) Approved Training Course



Presented in cooperation with ACORE

Fundamentals of Using RETScreen® Tools for Energy Project Analysis

3-day seminar / Prep course for the CRU exam / June 13-15, 2011 / CRU exam—June 15, 2011

9:00 am – 5:00 pm / Earns 2.0 CEU or 20 PDH / Seminar held at Long Beach Convention Center

About the seminar: Recognized worldwide as an efficient and user-friendly decision support tool, the RETScreen® Clean Energy Project Analysis Software allows professionals to quickly identify and assess the potential of various energy projects. This seminar aims at imparting a comprehensive understanding of the RETScreen® tool, as well as serving as a preparatory vehicle for the Certified in the Use of RETScreen (CRU) professional certification exam. The training includes both energy efficiency and renewable energy components, covering building envelope, HVAC, lighting, electrical equipment, wind energy systems, and photovoltaics, along with demonstrations and case studies. Participants will gain a sound understanding of the analysis opportunities offered by the software, such as cost, financial, greenhouse gas emission, risk, and sensitivity analyses. The CRU exam will be administered at the close of instruction on Day 3. To qualify for the exam, it is necessary to submit a CRU application, which can be obtained at www.aeecenter.org/certification/cru. Note: registering for the three day seminar does not automatically register you for the CRU exam. An additional fee of \$400 is required for the certification application and exam.

Seminar Outline: Major areas covered by this seminar:

- Day One:**
- Introduction to Certification and Overview of Course
 - Presentation: Energy Efficiency Concepts
 - Presentation: Prefeasibility Concepts
 - Demonstration of RETScreen® for Energy Efficiency Analysis

- Hands-On Case Study: Lighting
- Presentation: Lighting Technologies, Heating & Cooling Systems, Building Envelope & Ventilation
- Adding Building Envelope & Heating & Cooling System to the Existing Lighting Case Study
- Presentation/Demonstration: Understanding the Output of the RETScreen® Energy Efficiency Model
- Presentation/Demonstration: Cost Analysis with RETScreen®
- Adding Financial Analysis to the Existing Case Study
- Demonstration of Risk & Sensitivity Analysis Page
- Adding CHG Analysis to Existing Case Study

Day Two:

- Motors, Pumps, & Fans
- Compressed Air
- Steam Systems
- Refrigeration
- Presentation: Limits of RETScreen®
- Complete Hands-On Case Study No. 1: Commercial Facility
- Using RETScreen® for Renewable Energy Professionals
- Combined Heat & Power Systems
- Presentation: Solar Energy
- Upcoming Changes in RETScreen®

Day Three:

- Complete Hands-On Case Study: Energy Efficiency or Solar



Certified in the Use of RETScreen®
For more information, visit:
www.aeecenter.org/certification/cru

(Student's Choice)

About the Instructor:

MICHAEL ROSS is president of Renewable Energy Research, a company providing services in energy efficiency and renewable energy systems that specialize in simulation, modeling, design, and technical/economic analysis. For over 10 years, he has assisted the RETScreen® International group of Natural Resources Canada in the development of course material, case studies, and manuals and has given over 40 RETScreen® seminars across Canada.

Fees for this three-day seminar:

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



Ross

Fundamentals of Buying and Selling Energy

3-day seminar / Prep course for the CEP exam / June 13-15, 2011 / CEP exam—June 15, 2011

9:00 am – 5:00 pm / Earns 2.0 CEU or 20 PDH / Seminar held at Hyatt Regency Long Beach

About the seminar: This comprehensive three day program has been designed to provide the specific training and background information needed by professionals preparing to sit for the Certified Energy Procurement (CEP) Professional certification exam. The program covers the full spectrum of topics essential to the energy procurement process, examining both electricity and natural gas, from both a purchasing/procurement and a selling/marketing perspective. AEE's CEP program is designed to recognize professionals who have achieved a high level of expertise and competence in the areas of purchasing, selling, and marketing electricity and gas in today's deregulated market.

For those wishing to qualify for CEP Certification, the CEP examination will be administered at the close of instruction on day 3 of the seminar in the same location. In order to sit for the examination, it is necessary to submit a CEP application, which can be obtained by going online at www.aeecenter.org/certification/cep. Note that registering for the seminar does not automatically register you for the CEP exam. An additional fee of \$300 is required for the certification application and exam.

Seminar Outline: Major areas covered by this seminar:

- Legislation, regulation, energy outlook for energy procurement
- The structure of the electric utility industry
- The structure of the natural gas industry
- Purchasing electricity and natural gas under the new rules

- Metering, load profiling, and real-time pricing
- Energy trading and risk management
- Fundamentals of gas and electric marketing
- Energy cost avoidance strategies

About the Instructors:

Each seminar will be conducted by a team of instructors, which will include two of the following experts:

RICHARD J. COSTELLO, P.E., C.E.M., C.D.S.M., C.L.E.P., is president of Acela Energy Group. Prior to assuming his present position, he founded and served as president of Westwood Energy Group. Mr. Costello conducts seminars on energy procurement and management nationwide, and has participated in the development of AEE's Certified Energy Procurement (CEP) Professional program.

JOHN SNELL is a principal of Risk Management Incorporated. He has taken his hedging expertise and concentrated on the development of risk management structures to meet the special needs of investor-owned and public utilities, as well as industrial energy users. He has presented at numerous energy conferences, including industry trade groups such as AGA, APGA, SGA, NYMEX, and NARUC.

DAN CONRATH is a principal of Risk Management Incorporated. He has worked with commodity software and data analysis and developed an expertise in options and how to integrate their use into risk



Certified Energy Procurement Professional
For more information, visit:
www.aeecenter.org/certification/cep

management programs. His background in both software analysis and trading has created a unique quantitative approach to viewing risk management strategies.

Fees for seminar only:

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



Costello



Snell



Conrath



This program is a U.S. Green Building Council (USGBC) Education Provider Approved Certification Course

Fundamentals of Building Commissioning

3-day seminar / Preparatory course for the CBCP examination / June 14-16, 2011

9:00 am – 5:00 pm / Earns 2.0 CEU or 20 PDH / CBCP exam—June 16, 2011

Seminar held at Hyatt Regency Long Beach

About the seminar: Commissioning is the process of ensuring that building systems are designed, installed, functionally tested, and capable of being operated and maintained according to the owner's operational needs. Commissioning also can restore existing buildings to high productivity through renovation, upgrade and tune-up of existing systems. This program will examine all aspects of building commissioning, including project scheduling, roles and responsibilities of the project team, new building commissioning, retro- and re-commissioning of existing buildings, system-by-system commissioning requirements, TAB and verification procedures, the LEED rating system, project economic analysis, building code issues, and commissioning tools and technologies.

For those wishing to qualify for the CBCP certification, the CBCP examination will be administered at the close of instruction on the morning of the last day of the seminar at the same location. In order to sit for the examination, it is necessary that you submit a CBCP application, which can be obtained at www.aeecenter.org/certification/cbcp. Note that registering for the three day seminar does not automatically register you for the CBCP exam. An additional fee of \$300 is required for the certification application and exam.

Seminar Outline: Major areas covered by this seminar:

- Part One: Introduction to Building Commissioning**
- What is building commissioning and why we need it
 - Typical project schedule—commissioning perspective
 - Design-bid-build-operate and bid-design-build-operate
 - The project team
- Part Two: New Building Commissioning**
- Concept/programming phase objectives
 - Design intent and basis of design
 - Preliminary commissioning plan
 - Design phase objectives

Dynamic documentation (changes in design) / Comprehensive design review / Commissioning specifications / Budgeting and testing specialist

Construction phase objectives

Dynamic documentation (as built, TAB results, etc.) / Updating commissioning plan and construction observations / CX team meeting / Testing, adjusting, balancing, and controls Submittals/FRIs

Acceptance phase objectives

Acceptance and warranty / Continuous testing and changes / Indoor environmental quality and energy use / Operations, maintenance, and training

Part Three: Retro-Commissioning (includes recommissioning)

• Concept/programming phase objectives
Retro-commissioning, recommissioning, and building tuneups/ Developing, planning, and communicating / Defining the project scope and establishing a plan / Choosing the professional for retro-commissioning / Reviewing and updating building benchmarks / Original design intent vs. current use

Investigation phase objectives

Communication and occupant impact / Operation and maintenance / Building automation system and trend logs

Project turnover objectives: final report

Part Four: Total Building Commissioning

- Building envelope and electrical systems
- Site and landscape systems, other systems

Part Five: Additional Topics

- USGBC and the LEED rating system
- Commissioning guidelines, tools, and technologies
- Commissioning and the federal government

About the Instructor:

Certified Building Commissioning Professional
For more information, visit:
www.aeecenter.org/certification/cbcp

PAUL BANKS, P.E., C.E.M., C.B.C.P., a LEED accredited mechanical engineer, is a founding partner of B2Q, an engineering/project management consulting firm located in the Boston area. B2Q specializes in assisting facility owners, developers, contractors, and design team professionals in achieving their goals in the design, construction, and commissioning of safe, efficient, and productive buildings. Prior to founding B2Q, Mr. Banks served as CEO of Vanderweil Engineers, a leading MEP engineering firm specializing in the design of new and retrofit building systems for large commercial and industrial projects. Mr. Banks led Vanderweil's Facilities Services Group, which provided master planning, as well as the design and commissioning of utility infrastructure, energy, central plant, and MEP building systems.

Fees for three-day seminar only:

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



Banks



This program is a U.S. Green Building Council (USGBC) Education Provider Approved Certification Course



American Institute of Architects (AIA)/Continuing Education Systems (CES) Approved Training Course

SEMINARS

Seminars on buildings, lighting and M&V offered

Fundamentals of High Performance Building Design & Engineering

3-day seminar / Preparatory course for the HPB examination / June 14-16, 2011

9:00 am - 5:00 pm / Earns 2.4 CEU or 24 PDH / HPB exam—June 17, 2011

Seminar held at Long Beach Convention Center

About the seminar: This course is designed to provide energy professionals with the details of requirements for designing and engineering buildings to meet high performance standards, and to serve as a preparatory vehicle for AEE's High Performance Building (HPB) certification exam.

Participants will learn how to apply building rating systems including LEED, Green Globe Initiative, and ENERGY STAR. The course covers total building system requirements including HVAC, lighting, insulation, high performance mechanical energy, water management, and indoor air quality. The basics of building commissioning will also be presented, including integration with LEED® rating system.

For those wishing to qualify for HPB certification, the examination will be administered on the morning of the day following the seminar at the same location. In order to sit for the examination it is necessary to submit an HPB application; the application can be obtained online at www.aeecenter.org/certification/hpb. Note that registering for the three day seminar does not automatically register you for the HPB exam. An additional fee of \$300 is required for the certification application and exam.

Seminar Outline: Major areas covered by this seminar:

Day One:**High Performance Building Rating Systems**

Instructor: Nick Stecky

- LEED Family of Rating Systems of New Construction and Existing Buildings
- ENERGY STAR Rating System

- Green Building Initiative Green Globe
- Commercial Building Energy Consumption Survey

Day Two:
ANSI/ASHRAE/USGBC/IES Standard 189.1-2009 for High Performance Green Buildings

Instructor: Tom Lawrence

- What is the New Standard About and Why is This Being Created?
- Organization, Purpose, and Status of Standard 189.1
- Section-by-Section Highlights of the Standard

Day Three:**Fundamentals of Building Commissioning**

Instructor: Paul Banks

- Introduction to Commissioning
- Commissioning Definitions
- Commissioning Definitions: New Buildings
- Commissioning Definitions: Existing Buildings
- Existing Buildings Opportunities and Deliverables
- Commissioning for LEED Projects

About the Instructors:

THOMAS M. LAWRENCE, Ph.D., P.E., LEED AP, is a public service associate with the University of Georgia, and has over 30 years' professional experience in engineering and environmentally related fields. He is chair of ASHRAE Technical Committee 2.8, Building Environmental Impact and Sustainability, and a member of the committee which wrote ASHRAE Standard 189.1 on high performance green buildings.



High Performance Building Professional
For more information, visit:
www.aeecenter.org/certification/hpb

NICK STECKY, C.E.M., LEED AP, leads his own facilities consulting firm of NJS Associates, specializing in energy, sustainability, and green high-performance facilities. He has over 30 years of experience in facilities construction, operation, and management.

PAUL BANKS, P.E., C.E.M., C.B.C.P., a LEED accredited engineer, is a founding partner of B2Q, an engineering/project management consulting firm specializing in clients in achieving the design, construction, and commissioning of safe, efficient productive buildings.

Fees for seminar only:

Regular fee: \$1450; AEE member fee: \$1350; government & nonprofit fee: \$1350; team discount, deduct \$100 per registrant.



Lawrence



Stecky



Banks

Fundamentals of Lighting Efficiency

3-day seminar / Preparatory course for the CLEP examination / June 14-16, 2011

8:30 am - 5:00 pm / Earns 2.0 CEU or 20 PDH / CLEP exam—June 16, 2011

Seminar held at Hyatt Regency Long Beach

About the seminar: This program is designed as a preparatory vehicle for professionals who wish to sit for the Certified Lighting Efficiency Professional (CLEP) exam, as well as an excellent broad-based instruction program for those who want to "brush up on the basics" of efficient lighting design, upgrade, and application.

For those wishing to qualify for the CLEP certification, the CLEP examination will be administered on the morning following the last day of the seminar at the same location. In order to sit for the exam you must submit a CLEP application, which can be obtained at www.aeecenter.org/certification/clep. Note that registering for the two-day seminar does not automatically register you for the CLEP exam. An added fee of \$300 is required for the application and exam.

Seminar Outline: Major areas covered by this seminar:

- Fundamentals of light, lighting, electricity, and power
- Environmental concerns
- Building energy codes and regulatory compliance
- Utility and ESCO programs and incentives
- Lighting economics: problems and solutions
- Lamps, ballasts, lighting controls, luminaires, and fixtures

- Lighting evaluation and audits
- Lighting design process, installation, and commissioning
- Lighting systems operation, maintenance, and calculations

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, where 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 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 IdeAS, the Industrial Energy Advisory Service, advising clients regarding cost-effective applications of energy-saving technologies.

Fees for three-day seminar:

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



Certified Lighting Efficiency Professional
For more information, visit:
www.aeecenter.org/certification/clep



Feters



Spain



This program is a U.S. Green Building Council (USGBC) Education Provider Approved Certification Course



American Institute of Architects (AIA) Continuing Education Systems (CES) Approved Training Course

Fundamentals of Measurement & Verification: Applying the IPMVP

3-day seminar / Prep course for the CMVP exam / June 14-16, 2011 / CMVP exam—June 16, 2011

9:00 am - 5:00 pm / Earns 2.0 CEU or 20 PDH / Seminar held at Long Beach Convention Center

About the seminar: AEE, in cooperation with the Efficiency Valuation Organization (EVO), established the Certified Measurement & Verification Professional program with the dual purpose of recognizing the most qualified professionals in this growing area of the energy industry and raising the overall professional standards within the M&V field. The IPMVP, first established by the U.S. DOE, has become the internationally recognized protocol or performance M&V. This course is designed as a useful preparatory vehicle for AEE's Certified Measurement & Verification Professional (CMVP) program. Proven energy savings are now playing a significant role in financing energy management programs, whether through energy performance contracts or through emission trades under schemes such as the clean development mechanism of the UNFCCC.

While interest in savings data is growing, the state of the art in determining savings has also been rapidly evolving. This seminar will examine current methods of measuring and verifying savings, specifically reviewing the newest 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 estimates, maintaining space conditions, the role of verifiers, and the data needed for emission trading. Examples of specific techniques will be presented and class time will include problem solving and debate. Bring a calculator. Advance reading of IPMVP Volume I would be useful, though not required. (To obtain IPMVP Vol. I or for more information about EVO, visit www.evo-world.org.)

For those wishing to qualify for the CMVP certification examination, it will be administered at the close of instruction on the last day of

the seminar in the same location. In order to sit for the exam, it is necessary to submit a CMVP application, which can be obtained at www.aeecenter.org/certification/cmvp. Note that registering for the three day seminar 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:

- Reasons for M&V: types of uses and role in savings
- Current M&V protocols
- IPMVP 2007 and its evolution
- Developing an M&V plan
- Current issues in M&V: missing data, monitoring IAQ
- Emission trading
- Baseline adjustments: why they are necessary
- Key elements of success: examples of IPMVP 2007 options
- Selecting options: which one is best suited for my project
- Compliance/adherence with protocols and contracts
- M&V for U.S. federal projects

About the Instructors:

JOHN D. COWAN, P.Eng., M.B.A., C.M.V.P., president of Environmental Interface Limited, is chair of the EVO Board responsible for the IPMVP. He frequently acts as independent claims verifier of savings claims. During 30 years in the industry, his roles have included consulting engineer, ESCO owner/manager, and owner's rep in energy performance contracting matters.

STEVE SAIN, P.E., C.E.M., C.M.V.P., C.E.P., brings more than 20



Certified Measurement & Verification Professional
For more information, visit:
www.aeecenter.org/certification/cmvp

years' experience in the energy conservation industry to this program, including involvement in numerous energy conservation and alternative financing projects, involving U.S. federal agencies.

Fees for seminar only:

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



Cowan



Sain



American Institute of Architects (AIA) Continuing Education Systems (CES) Approved Training Course

THE BENEFITS OF CONTINUING EDUCATION:**Attendees who enroll in seminars at the 29th West Coast Energy Management Congress earn valuable professional credits.**

Attendees who take advantage of the seminar opportunities in conjunction with the 29th West Coast Energy Management Congress can earn CEU's, LU's, or PDH's that can be applied toward professional licenses or professional certification. AEE is an approved training provider for a variety of partner programs. Visit page 14 to see our special training partnerships and program initiatives to see where you can also apply these seminars.



EVENTS

Special events highlight the week at WCEMC

FREE Retrofitting Existing Buildings for Energy Efficiency and Demand Response

Tuesday, June 14—1:00-3:00 pm



Compared with new facilities, existing buildings and plants often have legacy equipment which waste energy, require more maintenance, and incur more downtime. A complete rip-out and replace strategy is cost prohibitive and very disruptive to ongoing operations and occupants.

New non-invasive technologies now allow for retrofits which take minutes to install, and deliver substantial savings with investment payback of less than 18 months. This presentation will cover actual case studies and savings data related to HVAC, lighting, steam, and compressed air retrofits.

Highlight: Pneumatic Retrofit Case Study. 300,000 sq-ft office building in San Jose, CA. Facility retrofitted in February 2009 to participate in PG&E Auto-Demand Response program and to enable energy efficiency. Project cost 80% less than conventional retrofit solution and took only eight days to complete (instead of six months if conventional technology were used). Investment payback period of 16 months...but PG&E incentives paid for 100% of project costs.

Who Should Attend?

Building Owners and Managers, Sustainability Officers, Design Professionals, Commissioning Organizations, Energy Consultants. Particularly those individuals who work with buildings which are 10 years old or older.

Attend and Learn (bullets represent what the attendees can expect to learn)

- Inefficiencies in older facilities—HVAC systems, lighting circuits, lighting controls, steam distribution
- Why they are so hard and costly to retrofit
- New technologies which enable non-invasive auditing and retrofit which qualify for utility incentives
- Collecting new data for ongoing commissioning
- Case studies of actual projects with M&V data

About the Presenter:

HARRY SIM, CEO, Cypress EnviroSystems

Harry has a passion for improving efficiency at existing facilities. At Cypress EnviroSystems, he has been involved in all phases of developing projects and applications for older buildings and industrial plants. Prior to his current role, Harry was a Vice President at Honeywell, involved with Building Automation, Industrial Automation, and Wireless and Sensing businesses. During his 15 years with Honeywell he has lived and worked extensively in Europe and Asia, which gives him a perspective on best practices globally. He was also a Shuttle Payload Director at NASA's Mission Control center in Houston. Harry holds degrees in Mechanical and Electrical Engineering from Stanford University and an MBAYA from Insead, France. He is a member of the Northern California Chapter of USNIC, where Cypress EnviroSystems is also a Gold Sponsor.

Everything You Need to Know About LED Lighting Workshop

FEE: \$150: Sponsored by the U.S. Department of Energy

Tuesday, June 14—9:00 am-5:00 pm



This workshop will be presented by John Curran, Ph.D., President of LED Transformations, on behalf of the U.S. Department of Energy. This one-day workshop is divided into two elements: LED technology and LED lighting applications. In the morning, fundamentals of solid-state lighting will be covered. In the afternoon, applications of solid-state lighting technology will be discussed. The last portion of the class will include a brief review of important lighting technologies such as OLEDs and induction lighting. A set of guidelines for participants will be provided to help guide their discussions with potential vendors of LED-based products.

AEE's Corporate and Government Energy Leader Program

Send a delegation to the Conference and Gain Leadership Recognition

Register three (3) or more individuals for the full West Coast EMC conference and not only will you save more than \$400 off the regular \$895 rate, but you will also be recognized as a Corporate Energy Leader Sponsor. This upgraded level of participation at the West Coast EMC 2011 will offer you the following added benefits:

- Complimentary conference passes based on level of participation, with a minimum of three (3) registrants. This includes access to the 5-track conference program, expo, free workshops, networking reception, a copy of the Proceedings CD, and luncheons on Wednesday, June 15, and Thursday, June 16, in the expo hall.
- Your logo will appear in preshow attendee promotions.
- Your logo and a link to your organization's website will appear on the official show website: www.energyevent.com.
- Onsite recognition with signage throughout the event, on the Proceedings, and the Conference Program distributed to all West Coast EMC conference attendees.
- Sponsor ribbons for your attendee badges signifying your participation as a Leader Sponsor.
- An additional 50 reduced-rate conference passes at \$595 each.

The Leader premier levels of recognition will determine the prominence of your visibility based on the STAR level your organization chooses. Those levels of recognition are listed below.

GREEN STAR — \$10,000:

Twenty-five (25) complimentary, full conference registrations*
A total value of \$22,375.

BLUE STAR — \$7,500:

Fifteen (15) complimentary, full conference registrations*
A total value of \$13,425.

RED STAR — \$5,000:

Seven (7) complimentary, full conference registrations*
A total value of \$6,265.

WHITE STAR — \$2,500:

Three (3) complimentary, full conference registrations*
A total value of \$2,685.

*Registration includes 2 expo luncheon functions, access to conference sessions, entrance into exhibit area, and a copy of the Conference Proceedings CD for each registered delegate.

For additional information or to customize your package by adding more attendees or AEE seminars, contact Bill Kent at (770) 447-5083, Ext. 217, or email Bill@aeeecenter.org

FREE New Technologies Breakfast presented by Leviton Manufacturing Co.

A forum to preview new and innovative products and services

Wednesday, June 15/8:00-9:00 am



Leviton Manufacturing Co. is pleased to sponsor the New Technologies Breakfast, a concise and informative forum for EMC attendees to preview the new and innovative products and services on display at the expo.

EMC exhibitors will present brief 5-to-8 minute presentations on their newest technologies, enabling attendees to quickly map out their time at the show and get a rapid survey of what is new. This is a must-attend event for anyone responsible for providing trip reports or technology summaries for their employer.

Leviton offers the broadest array of lighting energy management solutions and technological advancements, which are the cornerstones to its 100-year history of success in the industry. Be sure to put this event on your schedule and sign up on the registration form. For more information on sponsoring or speaking at this breakfast event, contact Jacqueline Fraga at jacqueline@aeeecenter.org or (770) 279-4390.

Conference attendee networking reception

Wednesday, June 15 / 4:00 pm



Join the Association of Energy Engineers for the West Coast Energy Management Congress' opening night reception on Wednesday, June 15, beginning at 4:00 pm, where you can share ideas with industry's key energy experts, conference and workshop speakers.

All conference and seminar attendees are invited. Sponsor this event or others by contacting lauren@aeeecenter.org or by calling her at (770) 447-5083, Ext. 211.

FREE Breakfast Energy Policy: Opportunities, Challenges

A program for women professionals and women-owned companies

Thursday, June 16/7:30-9:00 am



Join us for a FREE breakfast, which includes presentations of case studies of successful women-owned businesses and discussion of unique barriers and opportunities encountered.

The meeting is being presented by the Council on Women in Energy and Environmental Leadership (CWEEL). CWEEL was founded by Laurie Wiegand-Jackson, President of North America Power Partners, and is co-directed by MaryAnne Lauderdale, Senior Consultant Lime Energy. This group's goals are to provide representation of women in industry-related policy issues, such as the National Energy Policy Act; to address the high cost of energy, our present and future sources of energy, and the impact of energy on the environment; to secure a future in energy-related technical fields for women by supporting the training, education, and mentoring of young girls and women; and to contribute to the advancement of women in leadership positions throughout the industry.

For information about CWEEL, please contact Ruth Whitlock at whit@aeeecenter.org.

Portfolio Manager Benchmarking Workshop

FREE: Sponsored by AEE and ENERGY STAR

Thursday, June 16—9:00-11:00 am



The West Coast continues to be at the cutting edge of policies that promote energy efficiency and greenhouse gas mitigation in commercial buildings. In fact, Seattle and California have mandated the public disclosure of building energy use. Commercial building owners and operators must use EPA's energy performance tool, Portfolio Manager, to measure and disclose a building's energy performance score. Come to this workshop sponsored by AEE and ENERGY STAR where you will learn more about these new regulations as well as get hand's-on live training on how to use Portfolio Manager.

AEE Southern California Chapter Luncheon

Thursday, June 16 / 11:30 am-1:00 pm



Speaker: DEAN SAITO, Manager On-Road Strategies, Mobile Source Division, Science & Technology Advancement, South Coast Air Quality Management District (SCAQMD), will present the luncheon address.

To reduce both toxic and smog-forming air pollutants, the AQMD adopted a series of fleet rules to shift public agencies and certain private entities to lower emissions and implement alternative fuel vehicles whenever a fleet operator with 15 or more vehicles replaces or purchases new vehicles. The fleet rules simply require the purchase of lower emission vehicles that are commercially available. The fleet rules are consistent with California's goal of achieving healthful air quality by the deadlines imposed by the Federal Clean Air Act as well as California's adopted policy of reducing the state's petroleum dependence and reduced greenhouse gas emissions.

The SCAQMD also has an ongoing research and development program where clean fuels funds are invested in the development of clean vehicle technology. Such investment of resources are often leveraged by as much as 4:1 and beyond in the development of clean engine technology for purposes of reducing emissions to achieve healthful air quality in Southern California. Both programs will be discussed in detail during Mr. Saito's talk.

Dean Saito is currently the Manager of the On-Road Section within the Mobile Source Division at the South Coast Air Quality Management District (SCAQMD) in Diamond Bar, California. Prior to joining the SCAQMD in 2001, Mr. Saito was Chief of Smog Check Operations at the Bureau of Automotive Repair and has over 25 years of experience at the California Air Resources Board (CARB) in various functional areas including air quality planning, enforcement, and rule development. At the SCAQMD Mr. Saito's primary responsibility is the implementation of the District's Fleet Rules and development of mobile source strategies for AQMD and State Implementation Plan purposes.

The chapter luncheon free for paid conference attendees, \$20 for all others.

EVENTS

Upgrade your knowledge at the WCEMC expo

2011 EXPO HOURS

Wednesday, June 15
10:00 am – 4:00 pm
Thursday, June 16
10:00 am – 2:00 pm

Secure your booth space in the Expo
Call: Ashley Clark at (770) 279-4392
Fax: (770) 381-9865
Email ashley@aeecenter.org
www.aeepgrams.com/emc

29th WEST COAST EMC
LONG BEACH CONVENTION CENTER • Hall A
300 East Ocean Boulevard, Long Beach, CA



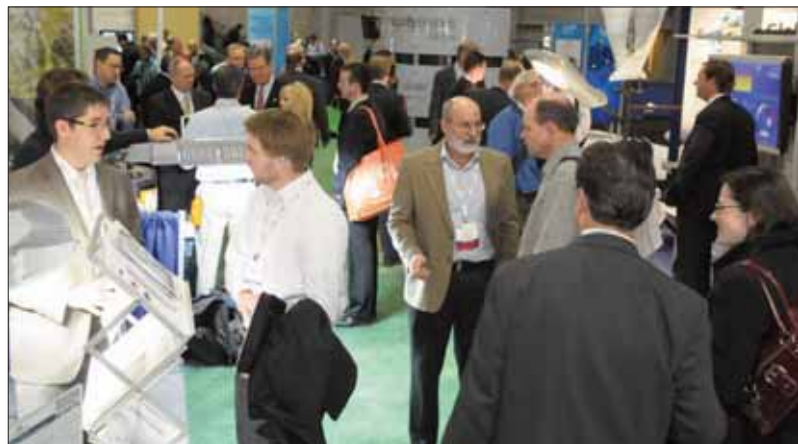
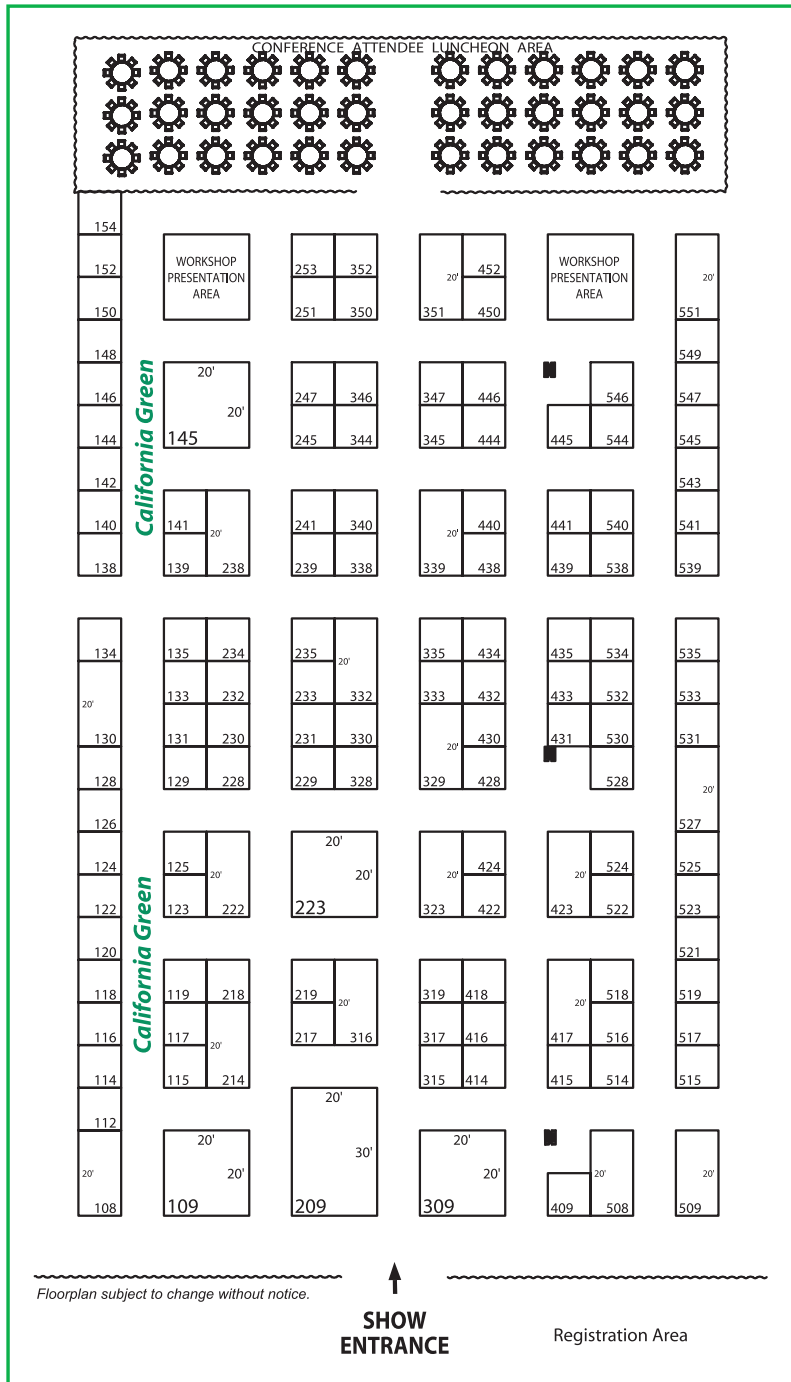
Free Exhibit Hall Workshops

Wednesday, June 15
10:00 am-4:00 pm
Thursday, June 16
10:00 am-2:00 pm

This popular addition to exhibit hall activities has been designed to enhance your learning and allow for an interactive experience for all expo attendees and presenters. Expo-only visitors, conference attendees, seminar delegates, and any other visitors to the show floor can participate in these sessions for FREE. View a sample list of workshop titles from previous shows below.

See www.energyevent.com for the most up-to-date listing of the workshops presentations scheduled for this year's West Coast Energy Management Congress.

- Bio-Gas and Syn-Gas Generation*
- Benefits and Applications of Electric Submetering in the Sustainable Facility Environment*
- Daylighting Controls*
- Dynamic Energy Envelopes for Today's Sustainable Buildings*
- Lessons Learned from a Failed Energy Efficiency Project*
- Energy/Water Efficiency Best Practices*
- Energy Savings Street and Area Lighting*
- Saving Energy and \$\$ With Green IT*
- The Technology and Development of the Cast Copper Rotor Motor*
- Building Energy Management—Cutting Your IT Power Demand in Half*
- Capitalism for Environmentalism with Solar*
- Prevention of Transformer Tank Explosions*
- Load Banks and Load Testing Solutions*
- Low Cost and No Cost Energy Saving Opportunities*
- Geothermal... The Sustainable Alternative*
- The Technology of the Copper Rotor Motor*
- Energy Savings Through Innovative Air Filtration Technologies*
- Maximize ROI: Cost Effective Energy Programs for Commercial Real Estate Portfolios*
- Challenges and Solutions of Implementing an Energy Management Solution to Gain Real ROI*
- There's More Than One Way to Green a Building*
- Commissioning for Noise and Vibration Sensitive Facilities*
- Resist or React: The Case for Reactive Load Bank Testing for Stationary Engines*
- Wireless Lighting Controls*
- Data Centers and Office Buildings: Real World Lessons and Achievements*
- Energy Efficient Chillers and Heat Recovery*
- Green Without Compromise, with the Industry's Most Efficient UPS*
- Energy Management Basics*



The SCE Mobile Energy Unit (MEU) / June 15-16 / EMC Expo Hours

During your West Coast EMC visit, make plans to attend a free tour of Southern California Edison's (SCE) Mobile Energy Unit (MEU) during regular expo hours. The Mobile Energy Unit (MEU) is a mobile education center which attends major events throughout Southern California Edison's service territory and promotes an energy efficiency "ethic" by increasing energy efficiency awareness and participation in SCE programs and services. The MEU promotes residential and nonresidential energy efficiency programs, including demand response, self-generation, solar, and income qualified programs using brochures, written materials, and interactive and static displays. Location: Long Beach Convention Center Promenade.



SHOWCASE

Presenting the latest products and services

Invitation: 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. *Listing is complete as of April 6th, 2011.* Visit the show website at www.energyevent.com for an up-to-date listing of profiles.

**ABRAXAS ENERGY CONSULTING**

Abraxas Energy Consulting, established in 2001, provides the following services for federal, commercial, and industrial clients: energy audits; retro-commissioning services; utility bill tracking software/training; utility bill auditing services; measurement and verification services, ENERGY STAR auditing services; and LEED EB consulting services. Our goal is to facilitate energy conservation by lowering our customers' operating costs and promoting a cleaner, more sustainable future.

**ACR SYSTEMS**

ACR offers portable solutions for energy audits—a 10-year battery powered by Data Logger is used anywhere to capture trends 24/7, 365 days/year. ACR SmartReader and PowerWatch products measure and record parameters used for V&M, PQ, and NEC studies. TrendReader® software presents information in graphical form and exports data. ACR is recognized globally as providing the most reliable tool of its kind.

**ADAPX**

Capturx™ software automates inspection paperwork for energy engineers, utilities, and facilities using digital pens. Handwriting on forms, building plans and maps are instantly digitized, so teams can document projects without the costs, delays, or risks of data entry. Data is instantly available in Microsoft Office, SharePoint, ArcGIS, and PDF files.

**ADVANCED TEST EQUIPMENT RENTALS**

Advanced Test Equipment Rentals provides quality test and measurement equipment to industries such as aerospace, defense, communications, and more. Our extensive inventory, custom solutions, and flexible rental terms set us apart as the total solution for your short- or long-term projects. Headquartered in San Diego, CA, Advanced Test Equipment Rentals has 30 years of experience and ships worldwide. Equipment is HUBZone and ISO 9001 Certified.

**AIRADVICE**

AirAdvice's BuildingAdvice® energy services platform enables energy engineers, consultants, and HVAC professionals to use automated benchmarks, assessments, and audits to deliver cost savings and greener buildings for their clients through energy efficiency.

**AIR PEAR by AIRIUS, LLC**

Commercial buildings consume 40-50% of all U.S.-produced energy—a simple, low-tech process in reducing building energy consumption is De-Stratification; 20%-40% reductions in HVAC operating loads can be achieved, reducing consumption and maintenance while improving comfort in every season. The Air Pear by Airius is the premier tool for De-Stratification and should be your first pick for an energy conservation plan.

**ALLIED INDUSTRIAL SYSTEMS**

Allied Industrial Systems is a licensed general and electrical contractor with design, engineering, and construction services, specializing in servicing the needs of industrial, manufacturing, and commercial clients. We perform various types of equipment installation including custom automation, mechanical, and electrical. We at Allied Industrial Systems are committed to meeting and exceeding your company's needs efficiently, effectively, and on budget.

**ALTURDYNE**

ALTURDYNE is a manufacturer of gas turbines, diesel and rotary engine power systems, electrical generator sets, sound attenuated housings, and electrical controls. We specialize in engine power systems from 5 to 5,000 HP and have placed over 4,000 systems into service for military, industrial, and telecommunications applications.

**ALUMEN8**

Alumen8, a leading manufacturer of energy-efficient lighting products, is dedicated to assisting our customers in achieving greater energy efficiency and substantial cost savings through better quality lighting. We work closely with architects, engineers, and energy management specialists to achieve their wattage reduction and light level goals. Alumen8 offers a diversified line of fluorescent and LED luminaires including highly energy-efficient pole and wall mount exterior, linear pendants, cove, task and washes, and high- and low-bay alternatives. We also specialize in custom luminaire design engineered to your specifications.

**AMERICAN POWER SOLUTIONS**

American Power Solutions is a specialty lighting company that has been in business for 20 years. We are dedicated to design, manufacture, and implementation of energy-saving lighting products to aid in the conservation of energy, create a better quality of light, save money on energy costs, and help in the fight against global warming.

**ARCHITECTURAL ENERGY CORP. (AEC)**

Founded in 1982, Architectural Energy Corporation is a leading energy engineering and sustainable design consulting firm, providing our clients with peak building performance. Our services include energy and daylighting analysis, sustainable design consulting, LEED® certification consulting, commissioning, measurement and verification, energy auditing, design and construction services, and retro-commissioning.

**ASSOCIATION OF ENERGY ENGINEERS (AEE)**

The Association of Energy Engineers is a nonprofit professional society whose mission is to promote the scientific and educational interests of those engaged in the energy industry and to foster action for sustainable development. AEE is the gateway for information on the dynamic field of energy efficiency, renewable energy, and carbon reduction strategies. Now in its 34th year, AEE offers a full array of educational and certification programs including seminars, conferences, books, journals, and networking trade shows. AEE's overall strength is highlighted by a strong membership base of over 13,000 professionals, thousands of individuals who have been certified under its programs, including Certified Energy Managers (CEM), Certified Energy Auditor (CEA), Certified Sustainable Development Professionals (CSDP), Certified Building Commissioning Professionals (CBCP), Certified Measurement and Verification Professionals (CMVP), and Certified Lighting Efficiency Professionals (CLEP). AEE's network of 71 chapters in the U.S. and 81 internationally offer networking opportunities around the world. Further, AEE's roster of corporate members is a veritable "Who's Who" of the commercial, industrial, institutional, governmental, energy services, and utility sectors.

**BENJAMIN ELECTRIC COMPANY**

Benjamin Electric manufactures power distribution equipment which includes completely integrated branch circuit Power Metering as well as controls. The Benjamin ArcLight Panelboard is a controllable circuit breaker panel that can communicate with any lighting control or building management system and software. This equipment provides visibility into electrical systems throughout the enterprise. Retrofits are our specialty.

**BVISIONARY, INC.**

Bvisionary, Inc. offers green products and consulting services. Bvisionary is an authorized biofuel fireplace dealer for Planika, a European-based company. This company was founded by Adriana D' La Rotta Thumann, who has over 20 years of experience working with major corporations in the area of facilities management, design and construction, and corporate real estate.

**CALIFORNIA STATIONARY FUEL CELL COLLABORATIVE**

Founded in June 2001, the California Stationary Fuel Cell Collaborative is a public-private partnership working to advance the deployment of stationary fuel cells for distributed generation and other applications to help bring clean, efficient, reliable and sustainable power to all Californians. It is co-chaired by Mary D. Nichols, chair of the California Air Resources Board, and Professor Scott Samuelsen, director of the National Fuel Cell Research Center at the University of California, Irvine.

**CALMAC MANUFACTURING**

Air conditioning is the main driver of on-peak energy usage. IceBank® energy storage uses plentiful nighttime electricity to make ice at night for use during peak demand periods the next day. By shifting a building's energy demand from on-peak to off-peak times, ice storage decreases cooling costs by up to 40% and reduces both source energy consumption and greenhouse gas emissions.

**CAMPBELL WINDOW FILM**

Campbell Window Film specializes in commercial energy efficient window films. Once installed these products block the sun's heat from entering the building, reducing the demand on the HVAC system. The rapid ROI makes this product a must have in any building with low efficiency glass. Window film is also used to acquire LEED points. We provide comprehensive inspections and energy analyses. Contact us for a free consultation today.

**CAPSTONE TURBINE CORPORATION**

Founded in 1988, Capstone Turbine Corporation develops, manufactures, sells, and services microturbine technology solutions. The Capstone MicroTurbine® is similar to a miniature jet engine in a case the size of a Sub-Zero refrigerator. Capstone turbines generate electrical power and usable exhaust heat which can provide hot water, steam, or drive an absorption chiller for air-conditioning, among other uses. Clean, efficient distributed generation offers a variety of societal and customer benefits. Capstone microturbines provide consistent output without fluctuations and are UL1741 certified, allowing interconnection with the utility grid. Another benefit of the Capstone Turbine is that a traditional backup diesel generator may not be needed, eliminating them as a source of even greater exhaust emissions. As the utility grid begins to lose frequency or voltage control, the facility loads can be switched off of the utility grid, and electric and heat energy are sustained by the microturbines.

**CARLO GAVAZZI INC.**

CARLO GAVAZZI manufactures industrial and building automation products. We offer a multitude of current, voltage, frequency, and phase monitoring devices, as well as a full range of energy metering and management devices/software, with RS485, Ethernet, and BACnet communications. Some of the products available include: Current Transformers, Monitoring Relays, Panel Meters, Energy Meters, Power Analyzers, Power Quality Analyzers, Smart Power Transducers.

**The Climate Registry****THE CLIMATE REGISTRY**

The Climate Registry is a nonprofit organization that operates the only voluntary carbon footprint registry in North America supported by states, provinces, territories, and tribes. The Climate Registry helps hundreds of public and private organizations measure, report, and reduce their carbon emissions with integrity.

**CLIMATEMASTER**

ClimateMaster has spent over 50 years focusing on the research, development, manufacturing, and sale of the most advanced water-source and geothermal heat pump systems available. ClimateMaster offers commercial and residential products, which have average life expectancies of 19-plus years and the lowest operating costs of any heating and cooling system.

**COMMISSIONING AGENTS, INC.**

Commissioning is not a side business; it's our core competency. We work with architectural and engineering firms, construction managers, LEED consultants, trades, and clients to confirm that the Owner's Project Requirements have been met. We have served as the technically competent, independent commissioning authority on projects of all sizes.

**CONTINENTAL CONTROL SYSTEMS**

WattNode® Power and Energy Meters: Continental Control Systems specializes in the design and manufacture of the WattNode AC (kW) power and (kWh) energy meters. Available products include MODBUS, standard Pulse-Output, and LonWorks Watt/hour WattNode transducers that offer interoperable power, energy, and energy demand metering. Applications include: PV system energy measurement, net metering, utility and facility submetering, equipment operation and performance monitoring, measurement and verification of power and energy production and consumption, and building automation and control.

SHOWCASE

Presenting the latest products and services



COOPER LIGHTING

As lighting technologies have advanced, Cooper Lighting has been at the forefront of the industry in helping businesses and communities leverage the latest technologies to improve efficiency, reduce costs, and meet environmental concerns. Let us show you the most recent advances in lighting and controls technology.



Copper Development Association

COPPER DEVELOPMENT ASSOCIATION (CDA)

CDA provides technical resources related to energy efficiency, power quality, and telecommunications wiring for the future. Copper for cables, busbar, transformers, and motors insures the best connectivity, reliability, ampacity, safety, and cost effectiveness.



THE CROM CORPORATION

The Crom Corporation specializes in the design and construction of secure, high-quality, virtually maintenance-free Prestressed Concrete Water Tanks. Crom Prestressed Concrete Tanks are highly regarded by both municipal and industrial clients for their longevity and pleasing appearance. The Crom Corporation has designed and built over 3,400 tanks for water storage and wastewater treatment. Since 1952, The Crom Corporation has developed and constantly improved water tank technology focusing on these important attributes: guaranteed watertightness, structural integrity, greatest life-cycle economy, and best aesthetic appearance. The Crom Corporation has become the preeminent prestressed concrete tank construction company by successfully building water storage tanks using the AWWA D110-Type II method. The Crom Corporation currently constructs over 100 tanks per year.



CYPRESS ENVIROSYSTEMS

Cypress EnviroSystems provides technologies to retrofit existing facilities for energy efficiency, auto demand response, and lower maintenance costs: This includes HVAC pneumatics for commercial buildings; steam, compressed air, and rotating equipment for industrial plants. Our technologies are non-invasive, take minutes to install, and typically pay back under 18 months.



DANFOSS TURBOCOR COMPRESSORS INC.

In the new world of deregulating energy markets, high energy costs, environmental focus, and converging technologies, Danfoss Turbocor's mission is to redefine lifetime operating costs for commercial HVAC applications. It is dedicated to the design, manufacture, marketing, and support of the world's most efficient and first totally oil-free commercial refrigerant compressors. With its breakthrough convergence of industrially proven component technologies, the Turbocor compressors promise new horizons in energy efficiency, reliability, and lifetime operating costs for mid-range chiller and rooftop HVAC applications.



DENT INSTRUMENTS, INC.

DENT manufactures portable energy and power measurement instruments and data loggers. DENT products provide meaningful energy data that is used to accurately allocate energy costs, identify energy cost-savings opportunities, and lower utility bills. These cost-effective instruments are used by energy professionals worldwide for measurement and verification studies, electrical load profiling, and energy audits.



DIGITAL LUMENS

Digital Lumens develops award-winning Intelligent Lighting Systems for warehouses, manufacturing sites, and industrial facilities that are proven to reduce lighting electricity expenses up to 90% while improving light levels. By integrating intelligent, LED-based fixtures—all with built-in sensors and wireless networking—with the LightRules management software, the system slashes lighting energy use and provides detailed operational reports.



DRANETZ

Dranetz, the leading provider of intelligent monitoring solutions for electrical demand and energy and power quality, pioneered the power quality monitoring industry in 1962, merging with Basic Measuring Instruments in 1996. Dranetz was acquired in early 2007 by the multinational corporation Gossen Metrawatt (GMC-I), GmbH of Germany, a world leader in test and measurement instrumentation, leveraging the technologies and markets of both companies. Dranetz corporate headquarters, located in Edison, NJ, includes sales, product support, and man-

ufacturing, with distributors and sales representatives located globally; the company is also a global supplier of GMC-I's electrical test and measurement products.



DYK INCORPORATED

DYK Incorporated, a division of DN Tanks, builds the highest quality Thermal Energy Storage (TES) and anaerobic digesters for all energy markets. Each tank is designed by DYK engineers to maximize the energy effectiveness and minimize the operational costs for the owner. Because they are constructed of prestressed concrete, they can be built above ground, partially buried, or fully buried. DYK tanks are built watertight and maintenance-free, providing decades of continuous service for owners.



DYNAMIC FABRICATION, INC.

Custom metal fabrication, certified welding, sheet metal, precision CNC, and conventional machining are offered, as well as prototype, R&D, and short-run production. Dynamic Fabrication designs and manufactures a wide variety of items from small machined parts to 30-foot-long 15,000-lb. weldments, manifolds, jigs, tanks, probes, augers, piping, tooling, hoppers, brackets, conveyors, vacuum chambers—all in different alloys. Quick turnaround, same day quotes, and parts in days are all part of our service. The company was established in 1981.



E-MON

Leading the industry for over 25 years, E-Mon D-Mon® metering products and E-Mon Energy™ software provide the reliable, accurate, and timely energy data that you need to manage your facility. Whether your goals are increased efficiency, cost reduction, or LEED certification, E-Mon D-Mon meters provide meaningful energy data to: allocate energy costs to tenants, departments or equipment; identify energy-saving opportunities and lower energy bills; and create itemized usage statements and graphs for energy analysis via E-Mon Energy™ meter reading software. E-Mon offers a diverse portfolio of products for all applications including commercial, industrial, residential, and institutional.



EATON CORPORATION

Eaton Corporation is a global technology leader in electrical components and systems for power quality, distribution, and control; hydraulics components, systems, and services for industrial and mobile equipment; aerospace fuel, hydraulics, and pneumatic systems for commercial and military use; and truck and automotive drivetrain and powertrain systems for performance, fuel economy, and safety. Eaton's Energy Solutions optimize building performance using proven methods that lower energy consumption, improve comfort, increase system performance, and maximize productivity. Our objective is to help our customers achieve their business goals while maintaining environmentally sustainable enterprises. We partner with our customers to help them meet their objectives and provide energy engineering and consulting, commissioning, and retro-commissioning facility optimization services, MEP design, turnkey project implementation, and performance contracting.



EFT ENERGY

EFT Energy Inc. is a leading provider of energy management solutions to business and government. EFT's popular Energy Manager AutoStart™ solution is a web-based, plug and play, "software as a service" (SaaS) system that gets your energy management up and running quickly, easily, and at low cost. Energy Manager AutoStart™ monitors and reports energy consumption, carbon emissions, and costs in real time from an unlimited number of data points, building sites, across all utilities, tariffs, third party databases, and all building and automation control systems. It is a mature, fifth-generation product that is easy to install and exceptionally easy to use by all users—property managers, administrators, energy managers, and facility engineers. Energy Manager AutoStart™ ensures that managers throughout the organization will have the most advanced tools they need to drive energy efficiencies, reduce operating costs, and create more sustainable, environmentally sound facilities.



EMCOR SERVICES MESA ENERGY SYSTEMS

EMCOR Services Mesa Energy Systems, a wholly owned subsidiary of EMCOR Group, Inc., is a licensed HVAC maintenance, service, building automation, and retrofit contracting company headquartered in Irvine, CA, with local offices serving the Greater Los Angeles, San Diego, San Francisco, Sacramento, Bakersfield, San Jose, Pleasanton, Fresno, Phoenix, and Las Vegas markets. Since our establishment in 1983 we have earned a reputation for providing value to our many satisfied customers through high-quality consulting services and efficient, cost-effective, customized installed solutions.



EMPOWER ELECTRONICS

Empower Electronics' programmable digital ballasts deliver brighter, more consistent light while saving electricity and

extending High Intensity Discharge (HID) lamp life. Whether you're using High Pressure Sodium or Metal Halide lamps, our ballasts will improve your lighting performance and significantly reduce your lighting operating costs.



ENERGENT INCORPORATED

Energent provides energy-intensive facilities with real-time, automated, and fully-managed M&T energy information solutions for gaining and sustaining energy savings. An internet-based technology platform and powerful analytic software provide customers with valuable and timely insights into their energy use. Customers leverage this real-time energy information to control their energy use, streamline their operations, and increase their profitability. Energent also works with utilities and distribution companies to implement customer programs and aggregate reporting to track progress to conservation targets.



ENERGETIC LIGHTING

Energetic Lighting is one of the leading manufacturers of energy-efficient lighting products in the world. As a producer, we manufacture a wide range of energy-efficient lighting products from CFL and LED lamps to T-5 and LED fixtures for both commercial and residential use. Our North America corporate office and warehouse facility is located in Chino, CA.



ENERGYICT

EnergyICT® is a market leader in its field, designing and offering highly advanced Energy Information and Communication Technology solutions and services to utilities, energy suppliers, and end customers. Since its foundation in 1991, EnergyICT has built up an impressive product portfolio that caters to all aspects of the international energy sectors. With years of world class business practice and industrial knowledge, EnergyICT has gained invaluable experience and fully understands its customers' expectations. Due to rapidly growing niches, the EnergyICT business has been split up in two major segments: namely Smarter Grids and Energy Management.



ENERGYVORTEX.COM

EnergyVortex.com is an open industry energy site designed to serve as a B2B community and e-commerce center. We have crafted the site for the exchange of ideas, the connection of buyers and sellers, and for professional career advancement. Visit the Buyers Guide to showcase your company's products and services. Read industry commentary covering a wide variety of issues. Search for qualified candidates by advertising your company's job opportunities in the Energy Vortex Career Center. Buy reference materials and e-books through the store. Learn more at www.energyvortex.com.



ENLINK GEOENERGY SERVICES, INC.

EnLink Geoenergy Services, Inc. is a design-build, turnkey, geothermal heat pump system contractor, providing clients with high-performance systems for all their heating, cooling, and energy efficiency needs. Since 1995, EnLink has continued to provide its wide range of services throughout the nation. With advanced technologies and complete quality control, EnLink ensures optimal geothermal heat pump system performance.



ENLUX LIGHTING

enLux is an award-winning manufacturer and innovator of LED technology based in Tempe, AZ. Its products include the R30/R20 Series LED lamps, DL Series Down Lights, 1KS Series Linear Light, and 6K Series Outdoor Area Light.



eSIGHT ENERGY INC.

Developed by eSight Energy, Inc., eSight is the most sophisticated energy management suite available worldwide. eSight provides powerful techniques for targeting specific areas of energy usage to identify \$\$ savings. Able to integrate with virtually any type of data on site (meters, loggers, BAS, SCADA, spreadsheets etc.), eSight is an extremely intuitive, 100% web-based solution. Please visit us in Booth 344 to find out how eSight can help you start saving money and energy today.



EVERLAST® INDUCTION LIGHTING

EverLast® Induction Lighting is a subsidiary of Full Spectrum Solutions, Inc. and has quickly become a leading manufacturer of energy-efficient lighting solutions for roadway, parking structure, facility and area lighting applications. Notable installations include: NASA, Cobo Convention Center, U.S. Military, University of California, University of Michigan, Harley Davidson, and Yuengling® Brewery.

SHOWCASE

Presenting the latest products and services



EVLUMA

Evluma manufactures rugged solid state illumination products that save energy, reduce light pollution and curtail maintenance costs. The Clearlight line of luminaires for dusk-till-dawn fixtures replace mogul base 50-175W Mercury Vapor and 70-150W High Pressure Sodium bulbs. Choose from the dark-sky friendly 40W EcoSpot, or the new 50W high-output Beacon and transform your existing fixture into an environmentally friendly, energy efficient device. Evluma is located in Seattle, WA.



EWA CORPORATION

EWA CORPORATION

"The endless challenge to the energy savings." We, Ewha Corporation, have been focusing on developing for heat transfer and thermal conservation products such as economizers as part of the waste heat recovery system and various types of fin tubes for HRSG since we were established in 1974, in order for us to be in pursuit of such demands that time has brought to us for energy savings. Ewha's product offerings include industrial economizer, heater, cooler, heat exchanger, pressure vessels, industrial fans, and a variety of fin tubes such as high-frequency welded finned tubes, G-type, L-fluted type, LL-type, KL-type, and extruded type. Ewha has been making every possible effort to supply all high-quality and highly competitive products. We will continue to strive to develop higher heat transfer efficient products in the future as we have been doing in the past.



FLEXIM AMERICAS CORPORATION

FLEXIM is known for its cutting-edge engineering and quality ultrasonic Flowmeters. Ultrasonic flow measurement has become a standard for BTU measurement. Its high turndown range, excellent accuracy, and retrofit installation make it the meter of choice. FLEXIM takes ultrasonic technology to a new level with certified traceable accuracy of both flow and temperature measurement.



FLOW SAFE, INC.

Flow Safe offers risk-free design solutions to "green" existing laboratories, featuring our proven, award-winning, patented technology to convert existing fume hoods into high-performance, low airflow hoods, together with energy-efficient, low-pressure-drop, environmental airflow control products. Flow Safe guarantees energy savings and worker safety protection.

FLUKE

FLUKE CORPORATION

Fluke Corporation is the world leader in compact, professional electronic test tools. From industrial electronic installation, maintenance, and service, to precision measurement and quality control, Fluke tools help keep businesses up and running.



FUNCTIONAL DEVICES

Functional Devices, Inc., a leading U.S. manufacturer since 1969, delivers quality electronic devices to the HVAC, building controls, energy management, refrigeration, and lighting industries. Our core offerings include prepackaged relays, current sensors, power control, power supplies, transformers, and accessories. Functional Devices continues with new innovations for the emerging energy savings market. Check out our newest plug-and-play devices: Evaporator Fan Controller for walk-in coolers and freezers, and Half-Light Ballast Controller for up to 50% energy savings for lighting.



GE JENBACHER

From jet engines to power generation, financial services to plastics, and medical imaging to news and information, GE people worldwide are dedicated to turning imaginative ideas into leading products and services that help solve some of the world's toughest problems.



GEOFINITY MANUFACTURING

Geofinity manufactures a high-efficiency, eco-friendly line of geoechange and water source heat pump systems that can provide forced air heating and cooling as well as chilled or heated water for residential, commercial, and institutional project applications. Geofinity products utilize R410a refrigerant and advanced, integrated Artificial Intelligence Controls and are capable of offering operational cost savings of up to 70% as compared to conventional HVAC systems.



Air Conditioning & Heating

GOODMAN CO., LP—AMANA PTAC SALES

Goodman's complete line of Amana® brand PTACs offer incremental heating and cooling needs. DigiSmart controls allow PTACs to be wirelessly controlled reducing energy consumption up to 35% through RF EMS solutions. Goodman Co. units can be easily networked through an RF mesh for additional money-saving energy and maintenance management from a single PC.



GREENTOW LLC

GreenTow trailers are the most advanced mobile solar power units to ever be constructed. Coupled with creative engineering and real-world input, we have created a functional, state-of-the-art, clean, quiet power solution. From houses and cabins to large military and disaster services—whatever your mobile clean power needs are, GreenTow has the solution.



HANITATEK WINDOW FILMS

Do you look at improving windows and assume "the ROI just isn't there." Reducing kWh and kW because of fenestration solar heat gain has made HanitaTEK a global leader in energy and environmental solutions. Visit the HanitaTEK Window Films booth and ask how some films won't even change the appearance of your glass.



HIGHLAND COMMERCIAL ROOFING

Highland Commercial Roofing specializes in design, installation, and service of energy-efficient "Cool-Roof" systems for commercial, industrial, and multi-family buildings. Since 1991 Highland Commercial Roofing has led the industry in exceptional asset protection for major corporations and building owners in Arizona, California, and Nevada with RainShield Seamless Single-Ply "Cool-Roof" Systems; Guaranteed not to leak...ever!



HONEYWELL UTILITY SOLUTIONS

Honeywell is a Fortune 100 diversified technology and manufacturing leader, serving customers worldwide with control technologies for buildings, homes, and industry, among other offerings. We also are a global leader in energy services, working with organizations to conserve energy, optimize building operations, and leverage renewable energy. Since the 1980s, Honeywell has completed more than 5,000 energy-efficiency projects in facilities across the globe.



HOTSTART® INC.

HOTSTART® is a leading developer and manufacturer of diesel engine block heaters. HOTflow™ engine heaters feature an integrated pump that circulates warm coolant through the entire engine at uniform temperatures. Constant circulation of the coolant eliminates hotspots that can deteriorate heater hoses, harm engine seals, and diminish coolant life. HOTflow™ heaters rely on fewer heating cycles—saving up to 2000 kilowatt-hours per year in energy consumption while extending heater element life and reducing maintenance work. HOTSTART® is headquartered in Spokane, WA, with a European office in Siegburg, Germany.



ICE KUBE SYSTEMS

Ice Kube Systems has manufactured heat pumps designed for use in integrated GeoExchange systems since 1995. Our goal is to provide building owners with the most cost-effective mechanical systems possible. To achieve this, we work closely with all the stakeholders: the building owners and operators, the architects and engineers, the contractors, and the people using the buildings. Low energy consumption and low energy cost are important, as are low operating and maintenance costs. Only when these are truly achieved does the building become economically and environmentally sustainable.



INGERSOLL RAND—AIR SOLUTIONS

Ingersoll Rand Air Solutions provides industrial grade compressed air systems, tools and pumps, and material and fluid handling systems. Ingersoll Rand's air compressor portfolio spans from 2 to 5,000 HP in a variety of technologies designed and implemented to meet your specific needs. Over 100 years of innovative design has enabled Ingersoll Rand to offer groundbreaking solutions that increase productivity, lower operating costs, and increase revenue via world-class service and support. Using cutting-edge system audits and air flow optimization tools, Ingersoll Rand offers a national team of engineers dedicated to your system design by reducing energy on a case-by-case basis.



INTEGRATED METERING SYSTEMS (IMS)

Integrated Metering Systems, Inc. has been developing and manufacturing electronic kWh meters for the submetering industry since 1989. We are pleased to announce completion of our newest 3-phase submeter design. The new Series 3000 meter boasts an improved RS485 serial data port with 2-way communication that supports BACnet and Modbus protocols, a built-in datalogger to store time and date stamped readings, Delta or Wye configurations, and much more!



INTELLIDYNE LLC

Intellidyne, based in Plainview, NY, manufactures a complete line of energy-efficiency controls for hydronic, steam, and forced air heating systems plus a line of microprocessor-based controls for AC and commercial refrigeration systems. Intellidyne controls utilize "dynamic cycle management"™ technology to reduce burner/compressor run time which results in energy savings. The controls are designed for easy installation on existing systems and new or replacement systems in residential and commercial buildings. The products have a 15-year replacement warranty and a "money back" performance guarantee.



KAESER COMPRESSORS, INC.

Kaeser Compressors, Inc. is the leader in providing reliable and energy-efficient rotary screw compressors and accessories for the industrial user. At the same time, we recognize that having efficient components is only part of the efficiency picture. The greatest efficiency gains are achieved through proper system design. In the course of helping many customers achieve better energy and production efficiencies, Kaeser has refined and improved air audit techniques. The result is our Air Demand Analysis (ADA) program. No other approach offers ADA's unique combination of affordability, convenience, and completeness. As an ENERGY STAR Partner, Kaeser is committed to helping industrial users increase compressed air system performance while saving energy saving and reducing maintenance costs.



kWhOURS, INC.

kWhOURS, Inc. is a mobile data collection, management, and connectivity software platform for commercial and industrial energy audits. We aim to assist our clients in cutting out the manual, repetitive tasks associated with the audit so that they can turn their attention to the parts of the audit that demand their expertise. Our suite of products aims to cut up to 40% of the time and cost associated with conducting an audit. Whether you are a lighting contractor, ESCO, or even facility manager, we have a solution for you. Come see our booth for more information.



LEM USA

LEM is a market leader in providing innovative and high-quality solutions for measuring electrical parameters. Its core products—current and voltage transducers—are used in a broad range of applications in industrial, traction, energy, and automotive markets. Featured will be WILEM wireless energy and Sentinel Battery monitoring solutions.



LEVITON MANUFACTURING COMPANY

Founded in 1906, Leviton is a leading global manufacturer of lighting and energy management systems, electrical wiring devices, and data center connectivity solutions. Leviton offers the most comprehensive line of energy management products to help you save energy, meet code compliance, and achieve LEED certification with our occupancy sensors, wireless self-powered controls, relay controls, commercial grade submetering, and more.



LUSIO SOLID-STATE LIGHTING

Lusio Solid-State Lighting, a brand and division of LightWild, provides highly energy-efficient, green LED lighting solutions for use in warehouses, laboratories, big-box retail, high ceiling office spaces, convention centers, and other commercial and industrial applications. Lusio specific offerings for high bay, low bay, and aisle lighting applications deliver optically sophisticated, extremely low maintenance lighting with lumens that meet or exceed traditional legacy fluorescent and metal halide lighting sources. All fixtures are backed by a 7-year warranty. Lusio is a worldwide registered trademark of LightWild.



LUTRON ELECTRONICS CO., INC.

Lutron Electronics Co., Inc., headquartered in Coopersburg, PA, is the world leader in the design and manufacture of light control solutions for both residential and commercial applications. The company offers a wide variety of lighting controls, whole-home and whole-building dimming systems, and electronically controlled shading solutions. Lutron products save energy, increase space flexibility, and enhance occupant comfort and productivity, making them essential to any home and building.

SHOWCASE

Presenting the latest products and services

**MEASURLOGIC, INC.**

Measurlogic, Inc. is your Energy Efficiency Partner. The company is focused on providing the most affordable, effective, and scalable energy management solutions for building owners and facility managers. Our extensive line of state-of-the-art sub-meters for load control, demand analysis, and cost allocation provide the tools to maximize profits and productivity. PowerStudio, the web-based, energy monitoring and control software application, offers the user the ability to analyze and manage real-time as well as historic data from multiple remote meters through an intuitive web browser interface. PowerStudio can also be used to log data from third-party energy, gas, and water meters, as well as any sensor with a mA or pulse output: e.g. flow, temperature, or BTU. Measurlogic, Inc. also provides a complete range of fixed installation or portable Power Quality Analyzers depending on your business needs. Our maintenance-free, voltage sag support modules enable customers to eliminate downtime caused by nuisance supply trips and dirty power. We pride ourselves by offering the very finest in technical support before, during, and after the sale.

MULTISTACK LLC

Multistack manufactures air- and water-cooled chiller systems that offer solutions to problems faced by building owners concerned with installation costs, energy efficiency, and redundancy. Our product catalog includes modular chillers, flooded chillers, Dedicated Heat Recovery Chillers™, heat pumps, water-cooled condensing units, air-cooled split systems and control systems to optimize both chiller and building performance.

**MURCAL**

MurCal is the premier West Coast distributor of emission control and engine monitoring systems. We are the official distributor for FW Murphy, Compliance Controls, EmeraChem, Testo, and MPI. This lineup of world-class products combined with MurCal's 50-plus years of experience makes us a one-stop shop for all your automation, control, and emission compliance needs.

**NATGUN CORPORATION**

Natgun Corporation, a division of DN Tanks, builds the highest-quality Thermal Energy Storage (TES) and anaerobic digesters for all energy markets. Each tank is designed by Natgun engineers to maximize the energy effectiveness and minimize the operational costs for the owner. Because they are constructed of prestressed concrete, they can be built above ground, partially buried, or fully buried. Natgun tanks are built watertight and maintenance-free, providing decades of continuous service for owners.

**NEPTUN LIGHT INC.**

Neptun Light Inc. is recognized as the industry-leading manufacturer of energy-efficient lighting products. We shall accomplish this through: (1) Continuous innovations in the quality and efficiency of our energy-saving lamps, fixtures, and automated lighting systems; (2) Development of new products based on market trends and emerging technologies to sustain NEPTUN Light's reputation not only as an industry leader, but also as an industry pioneer, and (3) Uncompromised commitment to customer service for Neptun Light representatives, distributors, and customers.

**NOREN PRODUCTS INC.**

Noren Products manufactures air-to-air and air-to-water heat exchangers for cooling sealed electrical panels without letting contaminants inside (including wash down, and hazardous locations). COMPACT CABINET COOLERS prevent failures and downtime caused by overheating electronics. Noren units are easy to install, low maintenance, Freon-free, and cost a fraction of air conditioning. Available in Nema 12, 4, 4x, stainless steel, UL Listed, cUL, and CE.

**NORTH AMERICA POWER PARTNERS (NAPP)**

North America Power Partners is a full-service Demand Response Provider. NAPP will represent and manage a facility's strategic assets in the wholesale electric markets and state programs.

**NORTHWEST ENERGY EFFICIENCY COUNCIL**

Building Operator Certification—BOCR—is a national workforce training and credential program offering skills in energy efficient building operation and maintenance practices. BOC training benefits facilities professionals such as building engineers, building

services managers, maintenance supervisors, O&M technicians, electricians, skilled trades, and facilities specialists. Certification provides a credential for professional development and offers employers a way to identify skilled operators. NYSERDA is sponsoring two BOC courses in Albany and Syracuse in 2011.

**ONICON**

ONICON Incorporated manufactures highly accurate flow meters and Btu meters for chilled water, hot water, and condenser water and steam systems. They are ideally suited for campus and central energy plant applications, as well as mixed-use facilities. Retrofit kits are available for installation without shutdown. Btu meters are compatible with BACnet, LonWorks, MODBUS, JCI-N2 Metasys, and Siemens-P1 Apogee networks.

PANASONIC HOME & ENVIRONMENT

Based in Secaucus, NJ, Panasonic Corporation of North America markets a broad line of digital and other electronics products for consumer, business, and industrial use. The company is the principal North American subsidiary of Panasonic Corporation (NYSE: PC) of Osaka, Japan, and the hub of Panasonic's U.S. branding, marketing, sales, service, and R&D operations. Panasonic is pledged to practice prudent, sustainable use of the earth's natural resources and protect our environment through the company's Eco Ideas programs.

**Lighting and Operational Control Systems****PLC MULTIPOINT**

For the past 20 years, PLC Multipoint has been making a name for itself as a creator and producer of the industry's finest lighting sensor controls. We've built a reputation as the one resource to solve the most complex control problems. Our systems are installed in businesses and institutions nationwide, saving energy through daylight harvesting, motion sensing, and time scheduling.

**PRECISION-PARAGON (P2)**

At Precision-Paragon (P-2) we design and manufacture industry-leading products for the relighting market. Our product line includes the largest line of energy-saving fluorescent, induction, LED and CFL fixtures, and retrofit kits in the market. In addition to our product lines, we offer our customers unique control options and an array of design, technical support, and custom manufacturing services that will help you provide the best energy-saving lighting solution for each application.

**PULSE ENERGY**

Pulse Energy is an Energy Management Software company, dedicated to helping the world's buildings and communities to improve their energy efficiency and keep track of the results. Buildings use 75% of the world's electricity and are responsible for one third of greenhouse gases produced. By designing Pulse Energy products around the needs of energy managers, facility managers, operations managers, and executives, we have created an energy management solution of unrivaled accuracy, ease of use, and relevance. Pulse's clients are seeing energy performance improvements of between 5% and 25%.

**RAB LIGHTING**

RAB Lighting, located in Northvale, NJ, is a leading manufacturer of Sustainable Outdoor Lighting Fixtures, using LED, HID, CFL, and motion sensing technology. Founded in 1946, RAB sells professional grade lighting nationwide, through a broad network of electrical distributors. RAB Lighting manufactures and sells a full line of outdoor lighting and lighting control sensors. All RAB products are designed for ease of installation, durability, and high quality standards.

**R.F. MACDONALD COMPANY**

R.F. MacDonald Co. sells and services boilers, pumps, and control systems to the industrial and commercial markets in California and Nevada. Representing over 35 manufacturers, we have been providing boiler and pump solutions to our customers for 55 years. Our huge equipment and parts inventory combined with eight strategic locations ensures fast and reliable service 24 hours a day, 365 days a year.

**REC SOLAR, INC.**

REC Solar is a leading provider of grid-tied solar electric systems with over a decade of proven performance helping federal gov-

ernment agencies, retailers, manufacturers, agriculture, high tech companies, and others benefit from going solar. Joining 6,000 others, America's most trusted institutions and brands such as the Veterans Affairs Administration, Costco, Nestle, DuPont, Longs Drugs, IKEA, and Safeway have chosen REC Solar to be their solar solutions provider. We make going solar easy.

**REGREEN CORPORATION**

ReGreen Corporation is a turnkey energy efficiency and water conservation company handling everything from audit and design to installation and rebate processing. We have a successful track record of developing and implementing lighting retrofit, HVAC, building automation, water conservation, and solar PV projects for commercial, industrial, residential, and retail clients. We provide a broad range of experience in the most current technologies and solutions to assure the highest level of analysis, design, and implementation. ReGreen holds Class B General, C10, C20, and C36 contractor licensure in California and services the entire western U.S. from our Los Angeles headquarters.

**SAGE METERING**

Sage Metering manufactures a variety of Thermal Mass Flow Meters for industry, building management systems, and environmental applications to measure gas flow rate and consumption. Our high-performance, award-winning, NIST Traceable Thermal Mass Flow Meters will help increase productivity, reduce energy costs, and maximize product yields. In addition, Sage Metering is heavily involved in reducing greenhouse gas emissions with our popular Sage Prime Flow Meter; the company is the only manufacturer of Thermal Gas Mass Flow Meters featuring in-situ calibration verification. Sage Metering's unique digitally driven technology measures the flow of natural gas, compressed air, landfill gas, digester gas flow, flare gas, nitrogen, and other common gases.

**SCE / GO SOLAR, CALIFORNIA**

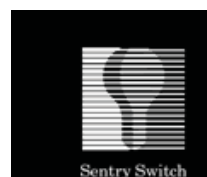
Southern California Edison, Pacific Gas & Electric, and the California Center for Sustainable Energy administer the California Solar Initiative program, which provides incentives to customers who install solar on their home or business.



An Acuity Brands Company

SENSOR SWITCH, INC.

Sensor Switch is an industry leader in developing and manufacturing Occupancy Sensor Products and Technology for Lighting Control. Our years of experience and wide breadth of sensor and photocell daylight control products ensure we can provide a reliable solution for any application or building type. Schools, warehouses, factories, offices, government buildings, retail stores—you name it, we've sensed it! And while the industry struggles to catch up, Sensor Switch keeps moving further ahead by introducing new products and technologies.

**SENTRY SWITCH**

Sentry LLC, offers the Sentry Switch, a centrally controlled wall light switch designed to replace conventional toggle or decorator style light switches in commercial lighting control applications. Sentry Switches work with your building's time clocks and a relay contactor panel to remotely turn off lighting, yet they allow complete local override. With the Sentry Switch, lights stay off until the area is occupied. The Sentry Switch provides a simple, reliable, and cost-effective lighting control system that begins paying dividends immediately upon installation. It is easily retrofitted into an existing building without costly installation or changing user habits.

**SKYLER ELECTRIC**

As a fully licensed and insured TL9000 company staffed with close to 100 of the best trained engineers, sales, and installation technicians, Skyler Electric Company is the best choice for all your DC Power requirements. We provide complete EF&I services for telecommunications, utility, UPS, and solar markets, including batteries, rectifiers, power distribution, inverters, converters, and UPS machines. We have three warehouse locations serving nine Western states.

SHOWCASE

Presenting the latest products and services

SMARDT

SMARDT, INC.

Smardt Inc. exists to maximize the extraordinary chiller operating efficiencies enabled by the Turbocor oil-free centrifugal compressor technology. Its water cooled chillers run from 60 TR to 900 TR, including a very flexible compact modular range which overcomes space or access constraints. Its air-cooled chillers run from 70TR through 220 TR. Condenserless and evaporatively cooled models are also available. Award-winning IPLV energy efficiency performance and drastically reduced maintenance costs (no oil!) mean lowest lifetime operating cost in mid-market capacities. Smardt, with sister company PowerPax and Axima Refrigeration, makes up the Quantum Chiller Group, offering globally consistent, locally certified chiller solutions with over 600 installations purring away worldwide.

SMARTENERGY
Energy-Saving Technology

SMART ENERGY SYSTEMS

New RF power quality device saves energy on inductive motors by reducing reactive power, kWh, line resistance, heat, line noise, and harmonic distortions from nonlinear loads. It also improves current flow and reduces electric system and motor temperature, which extends motor life and lowers operating costs. Results are measurable, verifiable, and guaranteed.

SOUTHERN CALIFORNIA
EDISON®

An EDISON INTERNATIONAL® Company

Show Host:

SOUTHERN CALIFORNIA EDISON (SCE)

Southern California Edison (SCE) is one of the nation's largest investor-owned electric utilities, serving nearly 14 million people in 15 counties of Central, Coastal and Southern California. Based in Rosemead, CA, the utility has been providing electric service in the region for more than 120 years. SCE is a subsidiary of Edison International, which also is headquartered in Rosemead. As the nation's leading purchaser of renewable energy, SCE delivered 13.6 billion kilowatt-hours of renewable energy to its customers in 2009—17% of the total energy delivered to its customers. This energy comes from such renewable sources as wind, solar, biomass, geothermal, and small hydroelectric. Over the last five years, SCE customers have saved 7.8 billion kilowatt-hours of electricity through SCE's energy-efficiency programs and services—enough to power 1.1 million average Southern California homes for an entire year. During that five-year period, SCE's partnership with its customers reduced greenhouse gas emissions by nearly 3.6 million metric tons—the equivalent of removing 680,000 cars from the road.



A Sempra Energy utility®

SOUTHERN CALIFORNIA GAS COMPANY

Southern California Gas Company has been delivering clean, safe, and reliable natural gas to its customers for more than 140 years. It is the nation's largest natural gas distribution utility, providing safe and reliable energy to 20.3 million consumers through 5.8 million meters in more than 500 communities. The company's service territory encompasses approximately 20,000 square miles in diverse terrain throughout central and Southern California from Visalia to the Mexican border. Southern California Gas Company is a regulated subsidiary of Sempra Energy (NYSE: SRE). Sempra Energy, based in San Diego, California, is a Fortune 500 energy services holding company.



TCP, INC.

TCP, Inc. is the global leader in energy-efficient lighting innovations dedicated to creating high-quality products that are better for the environment. Headquartered outside Cleveland, OH, TCP markets a variety of energy-efficient lighting brands for commercial, industrial, and residential applications, including compact fluorescent lamps, cold cathode, LED, and linear lighting solutions.



TE CONNECTIVITY

TE Connectivity is a global, \$12.1-billion company that designs and manufactures over 500,000 products that connect and protect the flow of power and data inside the products that touch every aspect of our lives. Our nearly 90,000 employees partner with customers in virtually every industry—from consumer electronics, energy and healthcare, to automotive, aerospace and communication networks-enabling smarter, faster, better technologies to connect products to possibilities.



TECOGEN, INC.

Tecogen is a leading manufacturer of Combined Heat and Power (CHP) products, including natural gas engine-driven cogeneration and air conditioning systems for industrial and commercial use. Tecogen systems supply electric power or

cooling while heat from the engine is recovered and purposefully used at the facility. The benefits are dramatic reductions in both energy costs and greenhouse gas emissions. Tecogen has an installed base of more than 2,200 units supported by an established network of engineering, sales, and service personnel across the U.S.



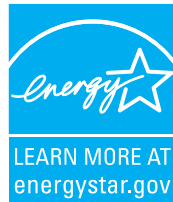
TRANE

Trane is a leading global provider of indoor comfort systems and comprehensive facility solutions. Its offerings include energy-efficient heating, ventilating and air conditioning systems, service and parts support, advanced building controls, and financing solutions. Each Trane system is designed to meet the specific needs of customers who want heating, cooling, dehumidifying, and air cleaning systems for residential, commercial, institutional, and industrial applications.



TRANSFORMATIVE WAVE TECHNOLOGIES

The mission of Transformative Wave Technologies is to develop and commercialize new technologies and services that transform the existing landscape, empowering clients to achieve their economic, efficiency, and sustainability goals. The current list of technologies is led by the patent-pending CATALYST Efficiency Enhancing Controller for reducing energy consumption in Rooftop Packaged HVAC systems by 25%-40%. Other products include the CATALYST's companion software solution, the eIQ Energy Intelligence Platform, iHAVE asset management tools, and Clean CT-01TM, an environmentally responsible HVAC water treatment solution.



U.S. EPA / ENERGY STAR PROGRAM

ENERGY STAR® is a voluntary partnership between businesses and the U.S. Environmental Protection Agency dedicated to saving money and protecting the environment through promoting energy efficiency in buildings. ENERGY STAR Service and Product Providers (SPPs) bring expertise and achievement to building owners and managers seeking to benchmark and earn ENERGY STAR certification for their buildings.



UNIVERSAL LIGHTING TECHNOLOGIES

Universal Lighting Technologies is a global leader in the design and manufacture of high-efficiency lighting ballasts and control systems. The company offers a full line of electronic and magnetic ballasts for compact fluorescent, linear fluorescent, and HID lighting, along with a comprehensive line of digital and analog dimming systems. Universal is a subsidiary of Panasonic Electric Works, Ltd., (PEW).



UTILIVISOR

utiliVISOR is the leading energy advisory firm providing oversight solutions to mission-critical facilities and large multi-use commercial offices nationwide. We're the *only* energy advisory firm that provides solutions for *both* central chilled water plant environments and metering systems. utiliVisor's applications, processes, and advisory services provide real insights that can help you significantly lower your operating costs—without replacing your existing systems. Plus, we've developed web-based applications using open standards that provide real-time monitoring and performance analysis.



WATERFURNACE INTERNATIONAL, INC.

WaterFurnace International supplies high-efficiency geothermal, water-source, forced air HVAC systems; chilled/heated water for fan coil, process, domestic, and in-floor applications which: (1) exceed energy reduction standards for federal and DOE mandates; (2) lower operating costs/24+ year life expectancy; (3) are LEED compliant green/renewable energy technology; and (4) are excellent for schools, offices, manufacturing, hospitals, and municipal buildings.



WATT STOPPER

WattStopper is a leading manufacturer of energy-efficient lighting controls for commercial, industrial, and residential use. We help customers find convenient ways to save energy, meet green initiatives, and comply with energy codes with our comprehensive range of products, programs, and services.



WESTERN ENERGY SYSTEMS/

GE Jenbacher/Capstone Turbine

Northeast Energy Systems and Western Energy Systems are GE Energy's authorized distributors for Jenbacher gas engine systems throughout the northeastern U.S., California, Oregon, Alaska, Hawaii, and the Caribbean region. Focused exclusively on gaseous fueled engine and power generation systems, both Northeast Energy Systems and Western Energy Systems provide comprehensive application, sales engineering, systems integration, and parts and service capabilities. As part of the Penn DDA/Penn Power Systems organization, both companies bring over 50 years' experience in reciprocating engine power applications.

ALSO EXHIBITING:

ARCTIC FREEZE CHILLER GROUP

BEKAERT SPECIALTY FILMS, LLC

DAVIDGE CONTROLS

GLACIAL ENERGY

J&D ELECTRONICS

OPTO 22

The WCEMC Expo is your opportunity to interact with your peers, ask the experts and reps all your product questions, and see the innovative technologies firsthand.



SPECIAL TRAINING PARTNERSHIPS AND PROGRAM INITIATIVES

The West Coast Energy Management Congress will feature a variety of partner programs and training opportunities to help attendees maximize their participation and leverage continuing education units toward their individual certification requirements by attending the event and co-located programs.



Many of AEE's Programs are Approved Under the U.S. Department of Labor Workforce Investment Act. Individuals may be eligible for training funding under the stimulus bill in both Washington or Oregon. Individuals should contact their local workforce development office to determine their eligibility and funding procedures.



AEE Teams Up with the U.S. Green Building Council Los Angeles Chapter. The Association of Energy Engineers is pleased to join with the U.S. Green Building Council's Los Angeles Chapter in presenting a LEED workshop, held in conjunction with the West Coast EMC 2011. For more information on this workshop, visit www.energyevent.com.



The American Council on Renewable Energy (ACORE) and the Association of Energy Engineers (AEE) Recently Signed a Memorandum of Understanding. The memorandum recognizes the "Fundamentals of Renewable Energy: Technologies, Applications, and Strategies" training seminar to be given in conjunction with West Coast EMC 2011, as well as the Renewable Energy Professional (REP) certification exam. ACORE will appoint an official to the Renewable Energy Professional Certification Board, and provide feedback as to course content as the renewable energy marketplace changes. ACORE has a strong presence in the nation's capital and their involvement makes this a topnotch training program option.



The Association of Energy Engineers is a Qualified Education Provider Under the U.S. Green Building Council Educational Program. The programs are featured in the Greenbuild 365 course catalog. Whether you are a design, construction, or real estate professional, an educator or student, or a LEED AP, Greenbuild 365's rich variety of educational offerings will inform your journey from novice to expert and beyond. Information on a broad range of green building topics is available in formats tailored to your knowledge level and preferred learning style.



AEE is Now an Approved Training Provider in the American Institute of Architects Continuing Education Systems (AIA/CES) Registered Provider Program. The AIA requires that registered architect members earn 18 Learning Units (LUs) hours of continuing education annually (8 hours of which must be related to Health, Safety, and Welfare topics and four of those eight in Sustainable Design) to remain in good standing. Architectural boards in 40 states, 10 Canadian provinces, and 19 countries have implemented mandatory continuing education (MCE) for licensure. Statistically, architects hold multiple state licenses. Most states with MCE requirements recognize the AIA/CES as the primary source of professional development for their licensed architects. This allows AIA members to present their AIA/CES transcripts (and non-members AIE/CES Certificates of Completion) to licensing boards to satisfy state requirements. In becoming an AIA/CES Registered Provider, AEE is committed to a system-wide, top-down commitment to qualify professional continuing education and sound administration. The AIE/CES offers providers of professional continuing education a myriad of opportunities to award CES Learning Units (LUs) and provide valuable information and guidance, while bypassing the time-consuming process of registering their courses with individual states.



The Institute of Industrial Engineers (IIE) Has Formed a Joint Venture Agreement with AEE. The agreement calls for the "Fundamentals of Carbon Reduction" live seminar program to be held June 15-16, 2011 at the Long Beach Convention Center in Long Beach, CA. IIE, a leading association in support of the industrial engineering professional, is an official co-sponsor of these programs and will be offering them to its broad, strategic membership base. IIE helps to elevate the image and prominence of industrial engineers. By bestowing awards that recognize the achievements of prominent industrial engineers taking part in high-profile events such as National Engineers Week and working on campaigns that put industrial engineering in the minds of the public, IIE raises the awareness of contributions made by industrial engineers.

REGISTRATION 29th West Coast Energy Management Congress

29th WEST COAST EMC WILL BE HELD AT:
Long Beach Convention Center – Hall A
300 East Ocean Boulevard, Long Beach, California 90802

HOTEL RESERVATIONS

Hyatt Regency Long Beach Hotel / (562) 624-1234 or (800) 233-1234 – Special group room rates of \$179 (single/double) per night have been arranged for AEE program participants (government rates available); mention AEE or WCCEMC to receive special group rates. The room block will be held through May 23, 2011. After that date, reservations will be on an "as available" basis; reserve early.

Westin Long Beach Hotel / (562) 436-3000 – Special group room rate of \$199 per night has been arranged for AEE program participants (government rates available); refer to Association of Energy Engineers or West Coast Energy Management Congress for special group rates. The room block will be held through May 20, 2011. After that date, reservations will be on an "as available" basis, so we recommend you reserve your room early.

PREREGISTRATION

1. ONLINE PREREGISTRATION:

(For credit card payments only) you may register online at:
www.energyevent.com

Please enter coupon code **EMCNNEWS** at checkout and discount will be applied before your credit card is charged.

2. 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.

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

Conference: (770) 447-5083, Ext. 226
Seminars: (770) 925-9633

4. BY MAIL (All Events): Complete the registration form below and return it with check or credit card number to: Registrar, Association of Energy Engineers, 4025 Pleasantdale Road, Suite 420, Atlanta, GA 30340-4264.

Your completed registration form, along with full payment, should be received no later than **June 3, 2011 (to receive early registration discount)**. After that date, plan to register onsite at the Convention Center. For questions regarding registration, call:

(770) 447-5083, Extension 226

JOIN THE ASSOCIATION OF ENERGY ENGINEERS 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*, *Sustainable Facility*, 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 3, 2011**. No refunds made after **June 3, 2011**. 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.

CORPORATE/GOVERNMENT LEADER GROUP RATES

Send 3 or more delegates to the conference and save on individual registration fees and also receive recognition as a Corporate or Government Leader. Your logo will appear on signage, onsite materials, and the show website. For more information on the Corporate/Government Leader Program, contact Bill Kent at bill@aeecenter.org or call (770) 447-5083 Ext. 217.

29th 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 3, 2011**. After that date, plan to register onsite. 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 or neatly printed 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 Trade Press/Media
 Industrial Construction/Architect Utility/Energy Producer Consulting Engineer
 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 3, 2011**. (This saves you the \$40.00 admission at the door.) Please send "Attn: Dept. EO" or fax to (770) 447-4354.

3 | Free Registration: Special Events

- Retrofitting Existing Buildings:** Tuesday, June 14, 2011 / 1:00 to 3:00 pm / FREE
- New Technologies Breakfast:** Wednesday, June 15, 2011 / 8:00 to 9:00 am / FREE
- Portfolio Manager Workshop:** Thursday, June 16, 2011 / 9:00 to 11:00 am / FREE
- CWEEEL Breakfast:** Thursday, June 16, 2011 / 7:30 to 9:00 am / FREE
- AEE Southern California Chapter Luncheon:** Thursday, June 16, 2011 / 11:30 am to 1:00 pm / FREE for paid conference attendees/\$20 all others

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 \$185
- AEE Membership plus Council on Women in Energy & Environmental Leadership (CWEEEL) – Dues \$215
- AEE Membership plus Facility Managers Institute – Dues \$215
- AEE Membership plus Cogeneration & Competitive Power Institute – Dues \$215
- AEE Membership plus Environmental Engineers & Managers Institute – Dues \$215
- AEE Membership plus Energy Services Marketing Society – Dues \$215
- AEE Membership plus Alternative & Renewable Energy Development Institute – Dues \$215

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

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

4 Conference/June 15-16, 2011	Please fill in appropriate fee.
Conference registration entitles you to attend any of the conference tracks. Fee includes lunches June 15-16, copy of proceedings, and exhibit pass. (Single session serves as opening meeting for all conference tracks.)	
INDIVIDUAL FEES:	
AEE MEMBER/GOVERNMENT*/NONPROFIT FEE – \$795	
NONMEMBER FEE – \$895	
SINGLE-DAY FEE: Specify <input type="checkbox"/> June 15 or <input type="checkbox"/> June 16 – \$450	\$ _____
GROUP DISCOUNTS (Applies to preregistration only):	
COMPANY PLAN (more than 3 delegates):	
GREEN STAR LEADER (25 delegates) – \$10,000	
BLUE STAR LEADER (15 delegates) – \$7,500	
RED STAR LEADER (7 delegates) – \$5,000	
WHITE STAR LEADER (3 delegates) – \$2,500	\$ _____

5 Seminars Separate Fees / June 13-16, 2011	Please fill in appropriate fee.
THREE-DAY SEMINARS: June 13-15, 2011 / 9:00 am - 5:00 pm	
<input type="checkbox"/> Fundamentals of Renewable Energy: Technologies, Applications, and Strategies*	
<input type="checkbox"/> Fundamentals of Energy Auditing*	
AEE MEMBER/GOVERNMENT*/NONPROFIT FEE – \$1350	
REGULAR FEE – \$1450	\$ _____
THREE-DAY SEMINARS: June 13-15, 2011 / 9:00 am - 5:00 pm	
<input type="checkbox"/> Fundamentals of Building Energy Simulation*	
<input type="checkbox"/> Fundamentals of Using RETScreen® Tools for Energy Project Analysis*	
<input type="checkbox"/> Fundamentals of Buying and Selling Energy*	
AEE MEMBER/GOVERNMENT*/NONPROFIT FEE – \$1250	
REGULAR FEE – \$1350	\$ _____
THREE-DAY SEMINARS: June 14-16, 2011 / 9:00 am - 5:00 pm	
<input type="checkbox"/> Fundamentals of High Performance Building Design and Engineering*	
AEE MEMBER/GOVERNMENT*/NONPROFIT FEE – \$1350	
REGULAR FEE – \$1450	\$ _____
THREE-DAY SEMINARS: June 14-16, 2011 / 9:00 am - 5:00 pm	
<input type="checkbox"/> Fundamentals of Building Commissioning*	
<input type="checkbox"/> Fundamentals of Lighting Efficiency*	
<input type="checkbox"/> Fundamentals of Measurement & Verification: Applying the IPMVP*	
AEE MEMBER/GOVERNMENT*/NONPROFIT FEE – \$1250	
REGULAR FEE – \$1350	\$ _____
ONE-DAY WORKSHOP: June 14, 2011 / 9:00 am - 5:00 pm	
<input type="checkbox"/> Everything You Need to Know About LED Lighting	
SINGLE-DAY FEE – \$150	\$ _____

*Note that registering for the seminar does not automatically register you for examination (certification programs only). Separate examinations for and certification application are required. For more information or to register online, visit www.aeecenter.org/certification.

6 Payment Information	
Select method of payment:	
<input type="checkbox"/> CHECK ENCLOSED (Payable in U.S. funds to Association of Energy Engineers)	
<input type="checkbox"/> CHARGE TO MY CREDIT CARD (for advance registrations only)	
<input type="checkbox"/> American Express <input type="checkbox"/> VISA <input type="checkbox"/> MasterCard	
CARD NO. _____	
Expiration Date _____ Signature _____	
TOTAL CONFERENCE, SEMINAR, & SPECIAL EVENTS REGISTRATION FEES	\$ _____
DISCOUNT (IF APPLICABLE)	-\$ _____
MEMBERSHIP FEES (OPTIONAL)	\$ _____
TOTAL ENCLOSED	\$ _____

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.