

September 22-24, 2004
Austin Convention Center
Austin, Texas



WORLD ENERGY ENGINEERING CONGRESS
WEEC 2004



SHOW NEWS
FOR ENERGY PROFESSIONALS

Energy's uncertain future

Industry braces for higher natural gas costs and decreased electric power reliability



Peaceful reflections: Mirrored in Lake Austin at dusk, the night skyline covers the city's business, governmental, and educational buildings.
Photo courtesy of Austin Convention & Visitors Bureau

"Today, companies must include energy factors in their strategic plans," observed Albert Thumann, Executive Director of the Association of Energy Engineers (AEE). "For example, the tightening of natural gas supplies has caused prices to spiral upward. To respond effectively to any of the myriad changes possible, companies need to develop strategies to reduce demand," he concluded.

At the World Energy Engineering Congress (WEEC) 2004, presented by AEE, attendees will learn how organizations such as Walt Disney, Motorola, and the Dallas/Fort Worth Airport have developed strategies to minimize the risk of energy blackouts, natural gas price spikes, as well as how to promote sustainable green energy projects. WEEC 2004 offers "real-world" solutions that can drastically reduce operating costs, improve profitability, and position companies to take advantage of new market opportunities as they emerge.

For 2004, the WEEC has moved to Austin, Texas—the heartland for "Green Energy" projects. AEE has teamed up with Austin Energy, U.S. EPA ENERGY STAR, and the Texas State Energy Conservation Office to create a unique, innovative, highly informative, and comprehensive event. No comparable energy program boasts a proven, 17-year track record of success, nor so thoroughly covers the energy efficiency and distributed generation marketplace for the commercial, institutional, industrial, and governmental universe.

At this year's WEEC attendees will:

- See how pending National Energy Policy legislation will impact their companies
- Discover what to expect in the area of power reliability
- Learn how to develop emergency backup and distributed generation strategies
- Gain insight into natural gas supply and price spikes anticipated for this winter and develop plans to minimize their impact

The WEEC offers more training flexibility than ever before, offering a 10-track conference featuring some 200 industry experts, 10 intensive seminars, and free workshops in the exhibit hall. Attendees may earn Continuing Education Units (CEU) or Professional Development Hours (PDH); these credits can be used for Professional Engineers' license renewal in many states, including Texas, and can also be used to maintain certifications. Among the featured topics to be addressed at this year's conference are:

Commissioning and High Performance Buildings. A veritable "who's who" in sustainable green building design, construction, and operation has been brought together for this event. Joining forces with AEE is AFE, the Association for Facilities Engineering, and faculty members of Texas A&M University, who will help attendees learn about commissioning, sustainable design, LEED certification, maintenance management, and strategies for high performance facilities and public buildings.

National Energy Policy Act. To find out what to expect on this front, and to see how the Act is currently shaping up, Barry Worthington, Executive Director of the United States Energy Association, will comment on the latest developments from a Washington insider's point of view. In addition, Millard Carr, President of Energy Management Solutions, Inc., who draws on his previous experience with the U.S. Department of Defense, will bring together policy experts from the U.S. Army, Air Force, and Navy to address the new provisions in energy management as they affect the federal sector. Washington observers predict that metering and submetering will represent a major focus of the bill. Attendees will also get the facts on metering strategies, sub-metering technologies, and the value of metering data.

Green Buildings. In one year, U.S. EPA ENERGY STAR has saved businesses an estimated \$5 billion in energy costs and has reduced pollution the equivalent of removing 10 million cars from the highways. Attendees will be able to get up to speed on new LEED certification programs for existing

WEEC Version 27.0 packed with new features

AEE has taken the best of past WEEC shows and expanded the program to create a brand new 27th WEEC. We've also added a slew of interactive upgrades that makes this truly the show not to miss. Here are a few highlights to make your experience a show-stopper.

- Austin—strategically located in the heart of Texas—and the surrounding states boast the highest concentration of AEE members. And the state of Texas itself is a showplace for green, renewable, environmental, and energy efficiency programs.
- Committed sponsors will make this show something special. Host Austin Energy, sponsors City Public Service, the Texas State Energy Conservation Office, U.S. EPA ENERGY STAR, and many more have signed up to create an in-depth program, training opportunity, dynamic exposition, and unparalleled networking experience.
- AEE awards banquet moved to opening night of the show. *Energy User News* Energy Efficiency Awards and U.S. EPA's ENERGY STAR Showcase will be featured.

- Balanced schedule with more exposition viewing time and more opportunities to interact with vendors and discuss your project needs.
- Comprehensive facility tours display the latest technologies operating within the framework of real-world applications.
- Free mini-workshops on the expo show floor focus on diverse technologies, PLUS free poster sessions with interactive Q&A time.
- Extensive seminar lineup, held concurrently with the show, that include a number of opportunities to earn certification.

- Teaming up with associations like the U.S. Combined Heat & Power Association, Texas Renewable Energy Industries Association, Texas Solar Energy Society, Texas Energy Partnership, and Texas A&M University to make this "Energy Week in Texas."
- Corporate leader sponsor, Baxter Healthcare International, has collocated its Energy Engineering Conference with WEEC. Other end users are sending delegations to this event. These are just a few of the great new features of WEEC 2004. If your group would like to collocate a meeting or send a delegation, please contact Ruth Whitlock at (770) 447-5083, Ext. 216. For show updates, visit: www.energycongress.com.



Show offers \$200 discount for early WEEC 2004 registration

The Association of Energy Engineers, presenter of the World Energy Engineering Congress 2004, has announced a V.I.P. conference discount offer of \$695 for registrations made prior to September 15, 2004. 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 who could take advantage of this special opportunity to send more of their employees to this premier energy event.

This offer excludes AEE membership fees, seminar fees, and any charges relating to exhibiting at the WEEC 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 new registrations for the WEEC in 2004.

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

Presented by  Hosted by 

All logos belong to their respective owners.

Non-Profit Organizations
U.S. Energy
THE ASSOCIATION OF
ENERGY ENGINEERS

Association of Energy Engineers
1000 North Loop West, Suite 420
Alamo, CA 94501-4200

EARLY REGISTRATION DISCOUNT COUPON

Simply attach this coupon to your completed registration form and return with your payment prior to the registration deadline of September 15, 2004.

buildings, the latest details on building commissioning, as well as new tools from U.S. EPA ENERGY STAR, green building standards, and green technologies.

Fuel Cells, DG, CHP, and Renewable Energy. Distributed generation technologies—including wind, solar, and combined heat and power—are playing an important role in providing needed power generation capacity while meeting the growing need for "Green Power." The market for wind energy, for example, remains robust, with more than 6,000 megawatts installed. In addition, this year's WEEC includes sessions on CHP policy developed by the U.S. Combined Heat & Power Association.

Fuel Cells and Alternative Energy Sources. Sessions will explore the use of fuel cells for emergency backup power, large-scale installations, and applications in vehicles and boats. Alternative energy sessions will examine photovoltaics, as well as the feasibility of wind and

solar installations now in place.

Energy Management. WEEC 2004 features the most extensive lineup of conference tracks focusing on energy management issues, including sessions on Fortune 1000 success stories. Noted consultant Peter Garforth of Garforth International will divulge what leading companies have accomplished to date. Participants will also hear firsthand about Motorola's successful energy management program. "Energy Efficiency and Ground Source Heat Pumps," sponsored by the International Ground Source Heat Pump Association, will show how heat pump systems are being applied, along with the cost/benefit analysis of their operation.

"Applying New Lighting Technologies" offers a complete update on lamps, ballasts, and controls. In a comprehensive session entitled "Energy Master Planning"—a program that alone is well worth your training investment in WEEC—some of the nation's leading firms, such as Walt Disney, Ameresco, and the Dallas/Fort Worth International Airport, share their strategic plans for energy efficiency.

Energy Week in Austin. WEEC 2004 is the centerpiece of a number of energy events encompassing "Energy Week in Austin." In one related event, the CHP Roadmap Workshop will be conducted on September 20 and 21 by the U.S. Combined Heat and Power Association.

The Texas Renewable Energy Industries Association will wrap up Energy Week with the popular annual Renewable Energy Roundup and Green Living Fair in Fredericksburg on the weekend following the WEEC.

All in all, WEEC 2004 is one of the year's most significant events for energy professionals. No matter where your firm is located, a trip to Texas will be well worth your investment.

EARN 20 PDH/2.0 CEU FOR PROFESSIONAL LICENSES OR CERTIFICATION BY ATTENDING THE THREE-DAY CONFERENCE



Inside this issue...

- Sponsors 2
- Plenary 2
- Opening Session 2
- Conference Program 3-4
- Week-at-a-Glance 5
- Seminars 6-7
- Expo/Floorplan 8
- Events 8-9
- Tours 9&14
- Product Showcase 10-13
- Registration Form 14

SPONSORS

Powerful sponsors develop and support the show

ABOUT THE HOST:

Austin Energy
Austin Energy is the municipally-owned electric utility of Austin, TX. Highly regarded nationally for its commitment to environmental stewardship, Austin Energy's initiatives include: No. 1 Green Power Program in the U.S.; award-winning Green Building Program; one of only five power companies nationally to support limits on CO₂ emissions; commercial and residential Energy Efficiency Rebate and Loan Programs; commercial and residential Solar Photovoltaic Rebate Program with one of the highest rebates in the country. The utility is committed to providing its 360,000 customers with the most clean, reliable power possible.

ABOUT THE SPONSORS:

The State Energy Conservation Office (SECO) of the Texas Comptroller of Public Accounts administers and delivers a variety of energy efficiency and renewable programs which significantly impact energy cost and consumption in the institutional, industrial, transportation, commercial, and residential sectors. SECO's mission is to promote and provide for the efficient use of energy, while protecting human health and safety and the environment. Beneficiaries of SECO's services include state agencies, public schools, city and county governments, institutions of higher education, private industries, and residential and commercial energy consumers. SECO's task is to enable Texas to enjoy the optimal benefit from the domestic energy we produce, to contribute to our state's growing economy through reducing a major operational cost of state government, school districts, municipal governments, hospitals, and residential and commercial energy consumers. SECO's task is to enable Texas to enjoy the optimal benefit from the domestic energy we produce, to contribute to our state's growing economy through reducing a major operational cost of state government, school districts, municipal governments, hospitals, and residential and commercial energy consumers. SECO's task is to enable Texas to enjoy the optimal benefit from the domestic energy we produce, to contribute to our state's growing economy through reducing a major operational cost of state government, school districts, municipal governments, hospitals, and residential and commercial energy consumers. SECO's task is to enable Texas to enjoy the optimal benefit from the domestic energy we produce, to contribute to our state's growing economy through reducing a major operational cost of state government, school districts, municipal governments, hospitals, and residential and commercial energy consumers.

U.S. EPA ENERGY STAR 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. ENERGY STAR has expanded to cover homes, 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.

Frontier
Established in 1999, Frontier quickly became a leading energy efficiency consultant to Texas' electricity distributors and consumers. Nationally, Frontier is emerging as an important consultant to electricity and gas consumers, providing energy efficiency turnkey retrofits, including HVAC, motor drives, refrigeration, and lighting. Other services include power or gas procurement support, rate negotiation, and load aggregation.

City Public Service (CPS) of San Antonio is the nation's largest municipally owned energy company providing both natural gas and electric services. Acquired by the City of San Antonio in 1942, CPS serves more than 600,000 electric customers and more than 300,000 gas customers in and around the 9th-largest city in the U.S. For more on CPS, visit our website: www.citypublicservice.com.

Carter-Burgess
Established in 1939, Carter & Burgess is a client and market focused engineering and architectural firm. Services include traditional E&A services, planning, including infrastructure planning, programming, condition assessment, program management, and construction management. The dedicated Energy & Power Solutions Group provides a broad range of services including energy audits, energy retrofits, district energy plans, cogeneration systems, distributed generation and power, infrastructure upgrades, energy procurement, and power quality assessment.

DAIKIN AC
Daikin is the only company in the world dedicated to manufacturing both air conditioning systems and refrigerants. Therefore, we develop and optimize every component within our unique system. For more than 80 years, Daikin has been manufacturing and supplying advanced, high-quality, air conditioning equipment for residential, commercial, and industrial applications. Our commitment to the U.S. market began in 1963 with the manufacture of fluorine chemicals. Today, our commitment is stronger than ever, and our presence is growing with the establishment of regional air conditioning operations in the U.S.

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

ABOUT THE CORPORATE LEADERS:

Baxter
Baxter International Inc. (NYSE: BAX) is a global healthcare company that, through its subsidiaries, assists health care professionals and their patients with treatment of complex medical conditions, including hemophilia, immune disorders, kidney disease, cancer, trauma, and other conditions. With 2003 sales of \$8.9 billion and approximately 50,000 employees in more than 100 countries, Baxter applies its expertise in medical devices, pharmaceuticals, and biotechnology to make a meaningful difference in patients' lives. For more information about Baxter, please visit www.baxter.com.

UPS
UPS is the world's largest package delivery company and a global leader in supply chain services, offering an extensive range of options for synchronizing the movement of goods, information, and funds. Headquartered in Atlanta, GA, UPS serves more than 200 countries and territories worldwide and operates the largest franchise shipping chain, The UPS Store. Inquire today to receive special savings through your AEE membership on air and worldwide express services. You can enroll in this program by visiting the UPS booth and referring to bid #CPS0001700.

GEICO
GEICO (Government Employees Insurance Company) is the fifth-largest private passenger auto insurer in the U.S. It provides auto insurance coverage for more than 5.5 million policyholders and insures more than 8.8 million vehicles. AEE has teamed with GEICO preferred Auto Insurance to offer great discounts to AEE members. Refer to AEE's website: www.aeecenter.org/membership.

ABOUT THE COSPONSORS SUPPORTING THE EVENT:
Cospensors for WEEC 2004 include the Electric Power Research Institute (EPRI), Energy User News, Illuminating Engineering Society/Texas Capital Section, National Assn. of Energy Service Companies, National Assn. of State Energy Officials, Southern Energy Institute, Texas General Land Office, Texas Renewable Energy Industries Assn., Texas Solar Energy Society, The Alliance to Save Energy, The Building Owners and Managers Assn. of Austin, The Power Marketing Assn., U.S. Combined Heat & Power Assn., U.S. Department of Commerce, U.S. DOE/Federal Energy Management Program (FEMP), U.S. DOE/Office of Energy Efficiency and Renewable Energy (EERE), U.S. DOE/Rebuild America, U.S. EPA/CHP Partnership, U.S. EPA/ Green Power Partnership, the United States Energy Assn. (USEA), the Texas Commission on Environmental Quality, and the Texas Energy Partnership.

PLENARY

All attendees are invited to these special sessions

AEE's Annual International Awards Banquet
September 22 / Reception 5:00-7:00 pm / Dinner 7:00 pm

On Wednesday, September 22, AEE will present its annual International Awards Banquet. The Foundation of the Association of Energy Engineers will conduct a silent auction during the reception. All attendees are invited to bid on items that our vendors, members, and member companies have donated. All proceeds will be distributed to students through the Foundation of the Association of Energy Engineers' Scholarship Program. If you are interested in making a donation of any kind, please contact Ruth Whitlock at (770) 447-5083, Extension 216, or email her at whit@aeecenter.org.



Long provides comedic entertainment
Cary Long, a fresh new face on the comedy scene, will provide the evening's entertainment during the AEE International Awards Banquet. Since his start on Ed McMahon's *Star Search*, Mr. Long has been seen on *Evening at the Improv*, *VH-1's Stardust Spotlight* with Rosie O'Donnell, and most recently in two appearances on the *Tonight Show with Jay Leno*. His act emphasizes everyday situations that everyone can relate to. He combines accents, cultures, and nationalities into a complete performance that will have audiences laughing at themselves. Cary's comedy is observational and he draws much of his material from the people he sees every day. His take on relationships between men and women will have everyone pointing at each other, saying, "I told you so!" In short, Cary Long will present a clean, funny, and must see program.

Closing brunch set for Friday morning
September 24 / 11:15 am - 1:30 pm

On Friday morning, September 24, during the Closing Keynote Brunch program, the Association of Energy Engineers will introduce the 2004 **AEE Energy Managers Hall of Fame**. In addition, Michael McCluskey, Senior Vice President at Austin Energy, will present the keynote address on "Managing Natural Gas Supplies in an Uncertain Market." He will discuss how securing reliable and economical natural gas is becoming increasingly difficult in the face of shrinking supplies and increasing price volatility. He will address what non-utility, industrial gas buyers can do to successfully tackle this challenge.



Keynoter presents real-world experiences
Michael McCluskey is Senior Vice President of Wholesale and Retail Markets for Austin Energy, the city's community-owned electric utility. His responsibilities include fuel purchases, power sales and purchases, and real-time energy operations. He developed and implemented Austin Energy's financial risk management program to manage fuel and purchased power costs and directed the creation of the utility's Qualified Scheduling Entity (QSE), which manages the transactions related to the Texas wholesale deregulated market. Mr. McCluskey is also responsible for business development for chilled water and combined heat and power sales, key-customer account services, product and services marketing, market research, and one of the most comprehensive and successful residential and commercial energy efficiency programs in the nation.

The WEEC is known for the high quality of information and new technologies presented by a superb lineup of industry experts



OPENING

Dynamic session kicks off this year's conference

Opening Session: Strategic Market Directions Wednesday, Sept. 22, 2004 8:45 - 11:30 am

Chair: STEPHEN A. ROOSA, C.E.M., C.I.A.Q.P., President, Energy Management Alternatives, Inc.

| | | | | | | |
|---|---|--|--|---|---|--|
| 8:45-9:15 am Military Band and Color Guard | 9:15-9:30 am Welcome to the WEEC ALBERT THUMANN, P.E., C.E.M. C.C.P., Executive Director AEE | 9:15-9:30 am Welcome to Austin WILL WYNN Mayor Austin City Council | 9:30-10:00 am Power Reliability and Utility Costs: What to Expect JUAN GARZA General Manager Austin Energy | 10:00-10:30 am Energy Policy 2004 BARRY WORTHINGTON Executive Director United States Energy Association | 10:30-11:00 am Energy Management Opportunities in Mexico JORGE GUTIERREZ-VERA, Managing Director, Sistemas de Energia Internacional, SA de CV | 11:00-11:30 am Green Energy for Industry JOE BIBEAU Group Director of Energy and Utility Services General Motors |
|---|---|--|--|---|---|--|



PROGRAM

The latest information for energy professionals

Program subject to change

TRACK A: Building Energy Management

SESSION A1: Wednesday • Sept. 22 • 2:00–4:00 pm Efficient Lighting Systems

Chair: NICK BLEEKER, Manager, Business Development, Day-Brite Lighting

2:00-2:30 pm
Advancements in Fluorescent Systems Technologies

EAKL R. PRINT, L.C., Director, Sales Development & Lighting Education, Lightolier

2:30-3:00 pm
Designing Efficient Lighting in Commercial Buildings

BRUCE PALMER, P.E., L.C., Project Manager, DLB Associates Consulting Engineers, P.C.

3:00-3:30 pm
Retrofitting Domestically Used Incandescent Lamps with Compact Fluorescent Program Potential

FATOUH A. AL-RAGOM, C.E.M., Assistant Research Scientist, Kuwait Institute for Scientific Research/ EILD/BET

3:30-4:00 pm
Panel Discussion

TRACK B: Industrial Energy Management

SESSION B1: Wednesday • Sept. 22 • 2:00–4:00 pm Fortune 1000 Success Stories

Chair: JAMES J. PARKER, P.E., C.E.M., Director, Energy & Facilities Management Program, North Carolina State University-Industrial Extension Service

2:00-2:30 pm
Leadership and How to Find It—The Key to Energy Cost Reduction

PETER J. GARFORTH, P.E., Principal, Garforth International LLC

2:30-3:00 pm
Green Classrooms

PHIL NAUGHTON, Senior Engineer, Motorola

3:00-3:30 pm
Practical Near-Term Strategies for Identifying and Achieving Energy Cost Savings at Industrial Sites

BRUCE L. PRETTY, Vice President—Technology, Vertich, Inc.

3:30-4:00 pm
Creating a New Industrial Energy Future: Fortune 1000 Case Studies

SCOTT R. LAIDLAW, Managing Director, Business Development, Cnergy Solutions

TRACK C: Information Technology

SESSION C1: Wednesday • Sept. 22 • 2:00–4:00 pm Metering Your Way to Energy Efficiency

Chair: DONALD MILLSTEIN, President, E-Mon, L.P., a Hunt Power Company

2:00-2:30 pm
Submetering Technology and Applications

DAVID BOVANKOVICH, Vice President of Engineering, E-Mon, L.P., a Hunt Power Company

2:30-3:00 pm
The Value of Meter Data Over the Internet

JOSEPH POLASKI, General Manager, MeterSmart, L.P.

3:00-3:30 pm
Real-World End Users of Meter Data

RANDOLPH L. HAINES, C.E.M., C.L.E.P., C.M.V.P., Energy Manager, Thomas Jefferson University

3:30-4:00 pm
Metering and Monitoring in Federal Facilities

GENE FOLEY, Director of Federal Marketing, Hunt Power

TRACK D: Federal Facility Management

SESSION D1: Wednesday • Sept. 22 • 2:00–4:00 pm Federal Energy Policy Forum

Chair: MILLARD E. CARR, P.E., C.E.M., President, Energy Management Solutions, Inc.

2:00-2:30 pm
U.S. Army Facilities Energy Policy

DAVID WILLIAMS, Army ESC Program Manager, Department of the Army, ACSIM

2:30-3:00 pm
U.S. Air Force Facilities Energy Policy

PATRICK G. MUMME, P.E., USAF Facility Energy Program Manager, HQ AFCEA/CESM

3:00-3:30 pm
U.S. Navy Facilities Energy Policy

WILLIAM F. TAYLER, Director, Department of Navy Shore Energy Office, Naval Facilities Engineering Command

3:30-4:00 pm
Panel Discussion

TRACK E: Energy Management

SESSION E1: Wednesday • Sept. 22 • 2:00–4:00 pm Engineer Superior Energy Efficiency with GSPHs

Chair: LISA McARTHUR, Assistant Director, International Ground Source Heat Pump Association, and PHIL RAWLINGS, C.G.D., GSPH Systems Specialist, Co-Energy Group, LLC

2:00-2:30 pm
Unbeatable Combination: Geothermal and Fuel Cells

JAMES E. BOSE, Ph.D., P.E., Executive Director, International Ground Source Heat Pump Association

2:30-3:00 pm
Geothermal Drilling—Codes and Conditions

PHIL RAWLINGS, C.G.D., GSPH Systems Specialist, Co-Energy Group, LLC

3:00-3:30 pm
Casino Hits the Jackpot with Geothermal

PHIL E. SCHOEN, President & CEO, Geo-Enterprises, Inc.

3:30-4:00 pm
The Purpose for and the Types of Grouting Materials

ALLAN SKOUBY, Director, Sales & Marketing, GeoPro, Inc.

SESSION A2: Thursday • Sept. 23 • 9:00–11:00 am Building Commissioning

Chair: SONG DENG, P.E., Asst. Director, Energy Systems Lab, Texas A&M University

9:00-9:30 am
Building Commissioning as a Partnering Process

BRUCE KESTER, Commissioning Agent, ccrd partners

9:30-10:00 am
Two Continuous Commissioning Case Studies from the State of Nebraska

MINSHENG LIU, Ph.D., P.E., Professor, University of Nebraska, Lincoln, and KEN HANSEN, P.E., Division Mgr., Energy Solutions, Omaha Public Power District

10:00-10:30 am
Appropriate Use of Third Parties in the Existing Building Commissioning Process—An In-House Approach to Retrocommissioning

TUDI HAASL, Associate Director of Commercial Services, Portland Energy Conservation, Inc.

10:30-11:00 am
Continuous Commissioning® of Salt Lake City Community College's South City Campus

SONG DENG, P.E., Assistant Director, Energy Systems Lab, Texas A&M University

SESSION B2: Thursday • Sept. 23 • 9:00–11:00 am Power Quality: Issues and Answers

Chair: WAYNE L. STEBBINS, Principal Electrical Engineer, Perigon Engineering

9:00-9:30 am
Electric Utility Power Quality Programs and Experiences

MEHRAD VATANI, Consulting Engineer, Austin Energy

9:30-10:00 am
Economically Controlling Power Line Harmonic Distortion Caused by Adjustable Frequency Drives

KEN FONSTAD, Training Manager, Danfoss Graham

10:00-10:30 am
A Case Study on Flicker

JOHN H. WAGONER, C.P.Q., Service Manager, TEGG Service Division, Sabino Electric, Inc.

10:30-11:00 am
TEX: The Next Generation of Storage Technology

JOHN SEARS, Product Marketing Manager, Active Power, Inc.

SESSION C2: Thursday • Sept. 23 • 9:00–11:00 am Building Automation Systems

Chair: CURTIS PHILLIPS, C.E.M., Senior Consultant, erg/Technicon

9:00-9:30 am
BACNET and Building Automation Systems—Past, Present, and Future

DAVID GUTHRIE, Regional Sales Manager—US Central, Delta Controls, Inc.

9:30-10:00 am
Building Automation Systems and Energy Management: How Facility Managers are Conserving Energy and Saving With Open Systems

KEVIN LYNCH, Director of Vertical Markets, Echelon Corporation

10:00-10:30 am
Using CrfSpecBuilder.com: Assistance with BAS Specification on the Web

STEVE TOM, Ph.D., P.E., Director of Technical Information, Automated Logic Corporation

10:30-11:00 am
Automated Building Security Functions and BAS: Latest Strategies

CURTIS PHILLIPS, C.E.M., Senior Consultant, erg/Technicon

SESSION D2: Thursday • Sept. 23 • 9:00–11:00 am Federal Alternative Financing

Chair: STEPHEN P. SAIN, P.E., C.E.M., C.E.P., C.M.V.P., President, Sain Engineering Associates, Inc.

9:00-9:30 am
Benefits of Commissioning and Metering via ESPC

SCOTT CONNER, P.E., Business Center Manager, U.S. General Services Administration

9:30-10:00 am
Policy Development for Performance Contracting in Transportation Applications

KATERI CALLAHAN, President, Alliance to Save Energy

10:00-10:30 am
Resource Efficiency Managers—Human Performance Contracts

STEPHEN P. SAIN, P.E., C.E.M., C.E.P., C.M.V.P., President, Sain Engineering Associates, Inc.

10:30-11:00 am
ESPC—Past, Present, and Future

SHARON GILL, Alternative Financing Representative, U.S. DOE FEMP—Denver Regional Office

SESSION E2: Thursday • Sept. 23 • 9:00–11:00 am Making the Business Case for Energy Efficiency

Chair: SHIRLEY J. HANSEN, Ph.D., C.M.V.P., CEO, Hansen Associates, Inc.

9:00-9:30 am
The Tough Energy Efficiency Sell

SHIRLEY J. HANSEN, Ph.D., C.M.V.P., CEO, Hansen Associates, Inc.

9:30-10:00 am
Calculating Energy Savings—Helping the Environment and the Bottom Line

FRANK J. RICHARDS, P.E., C.E.P., President, Richards Energy Group, Inc.

10:00-10:30 am
Maximize Energy's Contribution to the Business by Optimizing Process and Energy Systems as One

WALTER P. SMITH, JR., C.E.M., President and CEO, ETSI Consulting, Inc.

10:30-11:00 am
The Business Decision that Keeps on Saving

JIM BROWN, P.E., President, Energy Systems Associates, Inc.

SESSION A3: Thursday • Sept. 23 • 2:30–4:30 pm Applying New Lighting Technology

Chair: JOHN L. FETTERS, C.E.M., C.L.E.P., Effective Lighting Solutions

2:30-3:00 pm
Keeping HID Lights On

DAVID CRENSHAW, Development Engineer, The Bodine Company

3:00-3:30 pm
A New LED Safety Emergency Egress System

R.W. SANDS, Facility Technology Corporation

3:30-4:00 pm
Changes in Codes and Standards in Emergency Lighting

JOHN L. FETTERS, C.E.M., C.L.E.P., Effective Lighting Solutions

4:00-4:30 pm
Photoluminescent Glow-in-the-Dark Windowing Systems

ART FORST, President, and BOB KATZ, Vice President, SUMA Industries, Inc.

SESSION B3: Thursday • Sept. 23 • 2:30–4:30 pm Process Energy Optimization

Chair: WALTER P. SMITH, JR., C.E.M., President and CEO, ETSI Consulting, Inc.

2:30-3:00 pm
Process Energy Optimization: An Overview of the Methodology

WALTER P. SMITH, JR., C.E.M., President and CEO, ETSI Consulting, Inc.

3:00-3:30 pm
Optimizing Energy AND the Process Operations in a High-Temperature Food Processing Plant

STEVE O'BRIEN, P.E., Energy Manager & Senior Process/Project Engineer, Basic American Foods, Inc.

3:30-4:00 pm
Process and Energy Optimization at the U.S. Navy's Depot-Level Aircraft Maintenance Complex—Jacksonville, FL

LEE MERRILL, Utilities Department Head, Navy Public Works Center-JAX, and BOB MacDONALD, Program Manager, Jacksonville Electric Authority

4:00-4:30 pm
Using Energy Submetering to Optimize the Facility Energy Systems, the Process Operations, and More

CLAY CONNER, Vice President, ETSI Consulting

SESSION C3: Thursday • Sept. 23 • 2:30–4:30 pm Facility Data Acquisition, Management, and Optimization

Chair: CLINT D. CHRISTENSON, C.E.M., Johnson Controls, Inc.

2:30-3:00 pm
Data Acquisition for the Enhanced Voluntary Reporting of Greenhouse Gases Program

JAMES HAVEN, C.E.M., Board Chair/CEO, Global Warming Initiatives

3:00-3:30 pm
Emerging O&M Approaches

CLARK F. MAY, C.E.M., CMMS Consultant, Johnson Controls, Inc.

3:30-4:00 pm
Optimization Through Strategic Maintenance Management

CLINT D. CHRISTENSON, C.E.M., Johnson Controls, Inc.

4:00-4:30 pm
Harnessing the Power of Energy Information

RAHUL WALAWALKAR, C.E.M., M.S., Energy Analyst, Custom Energy Solutions, and BRUCE K. COLBURN, Ph.D., P.E., C.E.M., Chief Operating Officer, EPS Capital Corporation

SESSION D3: Thursday • Sept. 23 • 2:30–4:30 pm New and Emerging Technologies

Chair: STEVEN A. PARKER, P.E., C.E.M., Senior Research Engineer, Pacific Northwest National Laboratory

2:30-3:00 pm
Wireless Sensors for Improved HVAC Control

MICHAEL KINTNER-MEYER, Ph.D., Senior Research Scientist, Pacific Northwest National Laboratory

3:00-3:30 pm
Under-floor Air Distribution Systems

THOMAS L. WEBSTER, P.E., Research Specialist, Center for the Built Environment, University of California, Berkeley

3:30-4:00 pm
Geothermal Heat Pumps

JOHN A. SHONDER, Staff Member, Oak Ridge National Laboratory

4:00-4:30 pm
Novel Low-Energy Cooling System for Commercial Buildings

SHEILA HAYTER, National Renewable Energy Laboratory

SESSION E3: Thursday • Sept. 23 • 2:30–4:30 pm Take a Load Off—Demand Response for Transmission Overloads

Chair: FRANK J. RICHARDS, P.E., C.E.P., President, Richards Energy Group, Inc.

2:30-3:00 pm
Demand Response in Economic Planning at PIM

SUSAN COVINO, Manager, Demand Side Response, PIM Interconnection, LLC

3:00-3:30 pm
Demand Response for Markets and Reliability

ALISON SILVERSTEIN, Senior Energy Policy Advisor to the Chairman, Federal Energy Regulatory Commission

3:30-4:00 pm
FERC's Role in Demand Response

DAVE KATHAN, Senior Economist, Federal Energy Regulatory Commission

4:00-4:30 pm
End Users: Responsive Reductions Reap Rewards

PETER F. RICHARDS, C.E.M., Energy Engineer, Richards Energy Group, Inc.

SESSION A4: Friday • Sept. 24 • 9:00–11:00 am HVAC

Chair: ERIC W. SODERBERG, Energy Engineering Specialist, North Carolina State University

9:00-9:30 am
HVAC Optimization Through Inspections, Auditing, and Training

YOUSSEF ABOUZELOF, C.E.M., M.S., Director of Facilities & Energy Management, Zions Securities Corporation

9:30-10:00 am
Experimental Evaluation of Some HVAC Energy Conservation Options for Modular Classrooms

JACOB FREEMAN, Graduate Student, North Carolina State University

10:00-10:30 am
Precise BTU Replacement for Buildings

JOHN F. COCKERILL, Program Developer, Exquisite Heat

10:30-11:00 am
HVAC Optimization in Medical Facilities

DONALD M. RAINEY, C.E.M., C.I.A.Q.P., Optimization Specialist, Solutions

SESSION B4: Friday • Sept. 24 • 9:00–11:00 am International Energy Management and Renewables

Chair: ALBETH COLON, Ph.D., P.E., C.E.M., C.D.S.M., President, Gate Engineering Corporation

9:00-9:30 am
Assessment of Energy Efficient Lighting Market for the State of Kuwait

DINA ALNAKIB, Research Associate, Kuwait Institute for Scientific Research

9:30-10:00 am
Financing Wind Projects in Puerto Rico

ERNESTO CORDOVA, Ph.D., General Director, Electrica

10:00-10:30 am
Using Key Performance Indicators to Manage Energy Costs

JOHN VAN GORP, C.E.M., Industrial Markets Manager, Power Measurement

10:30-11:00 am
Case Studies of Reducing 90% of Nominal Deaerator Venting Losses

PETER TUNG, Applications Engineer, RCD Engineering

SESSION C4: Friday • Sept. 24 • 9:00–11:00 am Metering

Chair: HENRY R. PIO, M.S., P.E., C.E.M., Senior Engineer, SCADA & Telemetry Support, Metropolitan Wastewater Department, City of San Diego

9:00-9:30 am
The Utility Bill Tracking Software Shootout:

A Comparison of Desktop Packages

PETER V.K. FUNK, JR., C.E.M., Product Manager, Abraxas Energy Consulting

9:30-10:00 am
Advanced Interval Metering and Purchasing of Real-Time Priced Power by a Multi-Family Building (Evaluation of Operational Results and Lessons Learned)

PETER V.K. FUNK, JR., Attorney, Partner, Thompson Hine L.L.P.

10:00-10:30 am
Interval Meter Data: How Do I Decide If I Need It and If I Have It, How Can I Use It Most Effectively?

DOUG BURGESS, Senior Sales Executive, Enerwise Global Technologies

10:30-11:00 am
Metering and Integration

JOE HARRKELL, P.E., C.E.M., Assistant Director of Utilities, University of Cincinnati

SESSION D4: Friday • Sept. 24 • 9:00–11:00 am Financing Biomass Projects

Chair: CHRISTOPHER ABBUEHL, National Program Representative, U.S. DOE FEMP

9:00-9:30 am
Overview of Financing Options

CRAIG C. HUSTWIT, General Engineer, National Energy Technology Lab

9:30-10:00 am
Unique Financing for Landfill Gas to Energy Projects

SIBYL PAPPAS, Territory Manager, SCS Engineers

10:00-10:30 am
Structures and Issues Unique to Biomass, Landfill Gas, and Waste Energy Projects

WILLIAM GARNETT, III, Senior Vice President, National City Energy Capital

10:30-11:00 am
Panel Discussion

SESSION E4: Friday • Sept. 24 • 9:00–11:00 am Energy Master Planning

Chair: CORIOLANA SIMON, JaiENERGY

9:00-9:30 am
Sustainable Design at the Walt Disney Company

BRUCE R. RAUHE, JR., Senior Technical Staff, Walt Disney Imagineering R&D

9:30-10:00 am
The Business Value of Enterprise Energy Management at DFW Airport

RUSTY T. HODAPP, P.E., C.E.P.,

PROGRAM

The latest information for energy professionals

Program subject to change

TRACK F:
Energy Svcs./Competitive Energy**SESSION F1:**
Wednesday • Sept. 22 • 2:00–4:00 pm

Performance Contracting—A Mature Concept for a New Era

Chair: MARTY A. MOZZO, JR., P.E., C.E.M., C.I.E.P., President, M & A Associates Inc.

2:00-2:30 pm

Selling Performance Contracting

JAMES L. HARVEN, P.E., C.E.M., Project Developer, Alliant Energy-Cogenex

2:30-3:00 pm

Financing Opportunities in Performance Contracting—Past and Present

BRUCE K. COLBURN, Ph.D., P.E., C.E.M., Chief Operating Officer, FPS Capital Corp.

3:00-3:30 pm

The Fundamentals of M&V for Performance Contracting—Avoiding the Pitfalls

JAMES P. WALTZ, P.E., C.E.M., A.C.F.E., President, Energy Resource Associates, Inc.

3:30-4:00 pm

Case Study—A Successful Performance Contracting Project

MARTY A. MOZZO, JR., P.E., C.E.M., C.I.E.P., President, M & A Associates, Inc.

4:00-4:30 pm

SESSION F2:
Thursday • Sept. 23 • 9:00–11:00 am

Competitive Energy Procurement, Texas Style

Chair: GEORGE R. OWENS, P.E., C.E.M., President, Energy & Engineering Solutions, Inc.

9:00-9:30 am

Reverse Auction Tools, Knowledge, and Expertise for Successful Energy Procurements

RICH DOMALESKI, President, World Energy Solutions

9:30-10:00 am

Advances in Interval Data Analysis

LINDSAY F. HUDIN, C.I.E.P., President, Energizw, Inc.

10:00-10:30 am

Texas End Users—Nineteen Years of Negotiating Natural Gas and Electricity Rates

DON FOWLER, P.E., President, Fowler Energy Company

10:30-11:00 am

Deregulation in Texas: Understanding the New Market from the Consumer's Side

PHILLIP T. GOLDEN, Vice President, CDM Energy Management, LLC

11:00-11:30 am

SESSION F3:
Thursday • Sept. 23 • 2:30–4:30 pm

Competitive Energy/Energy Services

Chair: BILL BROOKS, CEO, Frontier Associates LLC

2:30-3:00 pm

Top Ten Issues End-Users Should Be Aware of When Purchasing Energy

RICHARD J. COSTELLO, P.E., C.E.M., C.I.E.P., President, Acela Energy Group

3:00-3:30 pm

Modeling Techniques for Establishing Accurate Baseline and M&V

JEFF STRINGFIELD, P.E., Solutions Development Leader, Honeywell, Inc.

3:30-4:00 pm

Negotiation Strategies for Achieving Discounted Gas Transportation from Your Local Utility

ANNE MCGREGOR, C.E.P., President, MC2 Consultants

4:00-4:30 pm

Energy Managers for BC Hydro

TERRY A. MOORE, C.E.M., President, ITM Consulting, Ltd.

4:30-5:00 pm

SESSION F4:
Friday • Sept. 24 • 9:00–11:00 am

Energy Management and Public Facilities

Chair: JIM BROWN, P.E., President, Energy Systems Associates, Inc.

9:00-9:30 am

The New Energy Manager in Public Facilities

JIM BROWN, P.E., President, Energy Systems Associates, Inc.

9:30-10:00 am

Maintenance: The Forgotten Key to Success

RIK J. MORRIS, P.E., C.E.M., Vice President, Energy Systems Associates, Inc.

10:00-10:30 am

The Role of the Energy Manager in New Construction

JAMES D. MCCLURE, P.E., President, Estes, McClure and Associates, Inc.

10:30-11:00 am

State Energy Management and Electric Aggregation

TRACK G:
CHP/Distributed Generation**SESSION G1:**
Wednesday • Sept. 22 • 2:00–4:00 pm

Cogeneration Project Development in Mexico

Chair: ARMANDO R. LLAMAS, C.E.M., ITESM Centro Estudios Energia

2:00-2:30 pm

Cogeneration and Self Supply in Mexico: Opportunities, Constraints, and Public Policy

ODON DE BUEN, M.S., President Energia, Tecnologia y Educacion SC

2:30-3:00 pm

Energy Management Opportunities in Mexico

JORGE GUTIERREZ-VERA, Managing Director, Sistemas de Energia Internacional, SA de CV

3:00-3:30 pm

Hurdles in CHP Project Development in Mexico

ARMANDO R. LLAMAS, C.E.M., ITESM Centro Estudios Energia

3:30-4:00 pm

Perspective of the Development of Cogeneration and Self Generation in the New Mexican Energy Market

LORENZO ARENA REYES RETANA, President and CEO, Industria Cogeneradora, S.A. de C.V.

4:00-4:30 pm

SESSION G2:
Thursday • Sept. 23 • 9:00–11:00 am

CHP Policy and Real World Applications

Chair: JOHN JIMSON, Executive Director, USCHPA

9:00-9:30 am

Making the Business Case for CHP

NEAL ELLIOTT, Ph.D., Industrial Program Director, American Council for an Energy Efficient Economy

9:30-10:00 am

CHP Market Potential

EDWARD J. HONTON, Director, Strategic Business Development, Resource Dynamics Corporation

10:00-10:30 am

CHP Policy Dilemmas from the Perspective of a Major Equipment Manufacturer

RICHARD S. BRENT, Director, Government Affairs, Solar Turbines, Inc.

10:30-11:00 am

CHP Systems for Commercial Buildings and Industrial Waste Heat Applications

TIMOTHY C. WAGNER, Ph.D., Project Leader, United Technologies Research Center

11:00-11:30 am

SESSION G3:
Thursday • Sept. 23 • 2:30–4:30 pm

Fuel Cells

Chair: ROBERT KING, President, Good Company and Associates

2:30-3:00 pm

Fuel Cell Technology—Progress Towards Commercialization

GERRY RUNTE, Executive Director, Hydrogen Energy Systems Center, GTI

3:00-3:30 pm

Large-Scale Stationary Fuel Cell Commercialization Using Existing Hydrogen Infrastructure—The Texas Business Case

JOSH TOSTESON, President, HydroGen, LLC

3:30-4:00 pm

Fuel Cell Hybrid Vehicles and Boats: Design, Costs, and Performance

CRAIG NEVHOUSE, Vice President, Anvu Incorporated

4:00-4:30 pm

Relying on Fuel Cells for Emergency Backup Power

JIM NERSCHOK, Program Manager, Plug Power Inc.

4:30-5:00 pm

SESSION G4:
Friday • Sept. 24 • 9:00–11:00 am

CHP Applications and Technologies

Chair: CLIFF BRADDOCK, Director of Energy Business Development, Austin Energy

9:00-9:30 am

Packaged Cooling/Heating-Power: Total Energy Security for Your Buildings

ED MARDIAT, Director of CHP Development, Burns & McDonnell

9:30-10:00 am

UT Austin's Combined Heat and Power System

JUAN M. ONTIVEROS, P.E., Director of Utilities and Energy Management, University of Texas at Austin

10:00-10:30 am

Energy Savings and Economics of DG and CHP in Commercial Buildings

ROBERT A. ZOGG, P.E., Associate Principal, TIAX LLC

10:30-11:00 am

The Anderson Microturbine

TRACK H:
Renewable Energy**SESSION H1:**
Wednesday • Sept. 22 • 2:00–4:00 pm

Renewable Energy and DG Opportunities

Chair: JOHN E. HOFFNER, Manager, CSGS Renewables, CSGS Services, Inc.

2:00-2:30 pm

Designing and Testing a Microgrid Concept of Distributed Generation

JOHN STEVENS, Senior Staff Member, Sandia National Laboratories

2:30-3:00 pm

Renewable Energy as a Clean, Secure Distributed Generation Resource

KARL RABAGO, Group Director, Clean and Renewable Energy, Houston Advanced Research Center

3:00-3:30 pm

Distributed Renewable Resources as a Pollution Abatement

MARK KAPNER, P.E., Senior Strategic Planning Consultant, Austin Energy

3:30-4:00 pm

State-of-the-Art Distributed Generation Technologies

JOHN BURZA, Ph.D., Principal Engineer, National Grid USA

4:00-4:30 pm

SESSION H2:
Thursday • Sept. 23 • 9:00–11:00 am

Case Studies: Renewable Energy Applications

Chair: STEPHEN A. ROOSA, C.E.M., C.I.A.Q.P., President, Energy Management Alternatives, Inc.

9:00-9:30 am

Case Study—Wind Park Project

ANDREAS WIESE, Head of Department of Renewable Energies, Lahmeyer International GmbH

9:30-10:00 am

Combined Photovoltaic and Thermal Power Systems Improve

ROBERT R. WALTERS, Ph.D., Vice President, Corporate Business Development and Marketing, ENTECH, Inc.

10:00-10:30 am

Marin County Offices—Photovoltaic Savings

ARNO HARRIS, CEO, Prevalent Power, Inc.

10:30-11:00 am

Renewable Energy Policies in Turkey

DURMUS KAYA, Ph.D., Researcher, Energy Systems & Environmental Research Institute

11:00-11:30 am

SESSION H3:
Thursday • Sept. 23 • 2:30–4:30 pm

Results of Legislative Initiatives and Pilot Programs for Emission Credits and Green Energy

Chair: MICHAEL MYERS, C.E.M., Senior Project Manager, Green Building Services, Aspen Systems Corporation

2:30-3:00 pm

Clean Air Through Energy Efficiency—The Texas Energy Partnership

MICHAEL MYERS, C.E.M., The Texas Emission Calculator and Hydrogen Reductions from Energy Efficiency/Renewable Energy Programs

JEFF HABERL, Ph.D., P.E., Associate Director, and TOM FITZPATRICK, Energy Code Specialist, Texas A&M University

3:00-3:30 pm

State Energy Management Services a New Approach

LEAH CLARK, Associate Partner, Accenture

4:00-4:30 pm

City of Dallas—A Local Government Approach to Energy Efficiency and Green Building

JESSE R. DILLARD, P.E., C.E.M., C.E.P., Senior Engineer, City of Dallas

4:30-5:00 pm

SESSION H4:
Friday • Sept. 24 • 9:00–11:00 am

Indoor Air Quality

Chair: GRAHAM PARKER, C.E.M., Program Manager, Pacific Northwest National Laboratory

9:00-9:30 am

A Unique Approach to IAQ and Chiller Efficiency

L.D. KICAR, R.I.A.Q.M., Manager HVAC Operations, Burns & McDonnell

9:30-10:00 am

Energy Efficiency Improvements Using CO₂ Demand-Controlled and Time-Controlled Ventilation in a Semiconductor Office Campus

MEL HENDRICKS, P.E., Texas Instruments, and ALEX LEE, Ph.D., P.E., Frontier Associates LLC

10:00-10:30 am

Designing Schools to Prevent IAQ

MARK SANDERS, P.E., C.I.A.Q.P., Vice President, MARCOR Remediation, Inc.

10:30-11:00 am

Practical Research on Reduction of Heating Energy by a Demand-Adjusted HVAC System

KONSTANTYN SPASOKUKOTSKIY, University of German Armed Forces

TRACK I:
High Performance Facilities**SESSION I1:**
Wednesday • Sept. 22 • 2:00–4:00 pm

Energy into High Performance Facilities

Chair: SCOTT P. CLARK, P.E., C.E.M., Vice President, Carter & Burgess, Inc.

2:00-2:30 pm

LoanStar Energy Efficiency Program Overview

PERRY BEEN, Deputy Director, State Energy Conservation Office

2:30-3:00 pm

High Performance Building Design Case Studies

PHIL SHERIDAN, Vice President, Carter & Burgess, Inc.

3:00-3:30 pm

The University of North Texas Laboratory High Performance HVAC Design

KEVIN FOX, P.E., C.E.M., LEED, Engineer, Carter & Burgess, Inc.

3:30-4:00 pm

What's the Latest and Greatest in Light Quality?

LARRY LEETZOW, President, Magray International

4:00-4:30 pm

SESSION I2:
Thursday • Sept. 23 • 9:00–11:00 am

Green Building Standards

Chair: RUSSELL G. SHAVER, C.E.M., Engineering Associate, Austin Energy

9:00-9:30 am

The ASHRAE Green Guide

STEPHEN C. TURNER, P.E., C.I.A.Q.P., Mechanical Engineer, Brown University

9:30-10:00 am

Advanced Buildings™: A Recipe for Energy Performance

JEFFREY A. JOHNSON, Executive Director, New Buildings Institute, Inc.

10:00-10:30 am

Greening Divisions 15 and 16

GAIL VITTORI, LEED, Co-Director, Center for Maximum Potential Building Systems

10:30-11:00 am

The Impact of Green Buildings Standards on Retrofit MEP Design in Institutional Buildings—Case Studies

RICARDO TRONCOSO, Senior Vice President, ACR Engineering, Inc.

11:00-11:30 am

SESSION I3:
Thursday • Sept. 23 • 2:30–4:30 pm

Maintenance Management

Chair: BUSTER BARKSDALE, Director Federal Programs, Energy Solutions Group, SAIC

2:30-3:00 pm

How Power Monitoring Can Save Your High Performance Facility

ROSS M. IGNALL, Systems Application Manager, Dranetz-BMI

3:00-3:30 pm

Design for Maintenance!

RICHARD L. KORAL, Secretary-Treasurer, Superintendents Technical Association

3:30-4:00 pm

Choosing the RIGHT Performance Indicators for Managing Maintenance

AMANI IBRAHIM AHMED ATTIA, C.E.M., Engineer, Alexandria Electricity Distribution Co.

4:00-4:30 pm

Planning for Maintenance and Operation

AMANI IBRAHIM AHMED ATTIA, C.E.M., Engineer, Alexandria Electricity Distribution Co.

4:30-5:00 pm

SESSION I4:
Friday • Sept. 24 • 9:00–11:00 am

Including Water Measures in Your Energy Management Programs

Chair: TOM V. BEE, P.E., President, Transformation Technologies, Inc., and CHARLES YOUNG, Regional Representative, Rebuild America

9:00-9:30 am

Overview of Water Conservation and Its Relationship to Energy Conservation

JAMES R. HOFNER, President, Water Management, Inc.

9:30-10:00 am

Energy and Water Savings in Food Service Areas

DON FISHER, President/CEO, Fisher-Nickel, Inc.

10:00-10:30 am

Training and Periodic Maintenance: Two Key Components of Water Conservation

LONNIE R. BURKE, Water Conservation Consultant, Resource Wise

10:30-11:00 am

Sustainable Testing and Performance

TRACK J:
High Performance Facilities**SESSION J1:**
Wednesday • Sept. 22 • 2:00–4:00 pm

ENERGY STAR Tools and Rating Systems

Chair: ROBERT D. SAUCHELLI, Program Manager, U.S. EPA ENERGY STAR Program

2:00-2:30 pm

Energy Management Guidelines

DON ANDERSON, Principal, ICF Consulting

2:30-3:00 pm

Understanding the Financial Value of Energy Improvements

JONATHAN LOW, Predictiv

3:00-3:30 pm

Automating the Rating Process

JAMES J. ROONEY, Vice President of Sales, e3 Corporation

3:30-4:00 pm

ENERGY STAR Case Study

JOHN J. LEMBO, Director of Energy, North American Hotel Operations, Starwood Hotels & Resorts Worldwide, Inc.

4:00-4:30 pm

SESSION J2:
Thursday • Sept. 23 • 9:00–11:00 am

LEED for New Buildings

Chair: MARILYN A. BROWN, Ph.D., C.E.M., Director, EERE Program, Oak Ridge National Laboratory

9:00-9:30 am

Overview of LEED Certification for New Construction and Existing Buildings

MICHAEL ARMY, President and Chair, LEED for Existing Buildings Committee, Leonardo Academy

9:30-10:00 am

Why Off-Peak Cooling Using Thermal Energy Storage Brings in LEED Gold: A Case Study of the Hewlett Foundation

AT A GLANCE Conference and seminar program overview

DAY ONE ■ WEDNESDAY ■ SEPTEMBER 22, 2004

Conference Opening Session: Strategic Market Directions ■ 8:45 – 11:30 am
 Luncheon in Exhibit Hall for Conference Attendees ■ 12:00 noon
 Exhibits Open ■ 11:00 am – 7:00 pm
 Reception/Silent Auction ■ 5:00 – 7:00 pm
 Banquet ■ 7:00 pm

| TRACK A: Building Energy Management | TRACK B: Industrial Energy Management | TRACK C: Information Technology | TRACK D: Federal Facility Management | TRACK E: Energy Management | TRACK F: Energy Services/ Competitive Energy | TRACK G: CHP/ Distributed Generation | TRACK H: Renewable Energy | TRACK I: High Performance Facilities | TRACK J: High Performance Facilities |
|---|---|---|---|---|---|---|---|---|---|
| SESSION A1: Wednesday, September 22 2:00 – 4:00 pm | SESSION B1: Wednesday, September 22 2:00 – 4:00 pm | SESSION C1: Wednesday, September 22 2:00 – 4:00 pm | SESSION D1: Wednesday, September 22 2:00 – 4:00 pm | SESSION E1: Wednesday, September 22 2:00 – 4:00 pm | SESSION F1: Wednesday, September 22 2:00 – 4:00 pm | SESSION G1: Wednesday, September 22 2:00 – 4:00 pm | SESSION H1: Wednesday, September 22 2:00 – 4:00 pm | SESSION I1: Wednesday, September 22 2:00 – 4:00 pm | SESSION J1: Wednesday, September 22 2:00 – 4:00 pm |
| Efficient Lighting Systems | Fortune 1000 Success Stories | Metering Your Way to Energy Efficiency | Federal Energy Policy Forum | Engineer Superior Energy Efficiency with GSHPs | Performance Contracting— A Mature Concept for a New Era | Cogen Project Development in Mexico | Renewable Energy and DG Opportunities | Insight into High Performance Facilities | ENERGY STAR Tools and Rating Systems |

DAY TWO ■ THURSDAY ■ SEPTEMBER 23, 2004

Exhibits Open ■ 10:00 am – 4:00 pm

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| SESSION A2: Thursday, September 23 9:00 – 11:00 am | SESSION B2: Thursday, September 23 9:00 – 11:00 am | SESSION C2: Thursday, September 23 9:00 – 11:00 am | SESSION D2: Thursday, September 23 9:00 – 11:00 am | SESSION E2: Thursday, September 23 9:00 – 11:00 am | SESSION F2: Thursday, September 23 9:00 – 11:00 am | SESSION G2: Thursday, September 23 9:00 – 11:00 am | SESSION H2: Thursday, September 23 9:00 – 11:00 am | SESSION I2: Thursday, September 23 9:00 – 11:00 am | SESSION J2: Thursday, September 23 9:00 – 11:00 am |
| Building Commis- sioning | Power Quality: Issues and Answers | Building Automation Systems | Federal Alternative Financing | Making the Business Case for Energy Efficiency | Competitive Energy Procurement, Texas Style | CHP Policy and Real World Applications | Case Studies: Renewable Energy | Green Building Standards | LEED for New Buildings |

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

| | | | | | | | | | |
|--|--|---|--|--|--|--|--|--|--|
| SESSION A3: Thursday, September 23 2:30 – 4:30 pm | SESSION B3: Thursday, September 23 2:30 – 4:30 pm | SESSION C3: Thursday, September 23 2:30 – 4:30 pm | SESSION D3: Thursday, September 23 2:30 – 4:30 pm | SESSION E3: Thursday, September 23 2:30 – 4:30 pm | SESSION F3: Thursday, September 23 2:30 – 4:30 pm | SESSION G3: Thursday, September 23 2:30 – 4:30 pm | SESSION H3: Thursday, September 23 2:30 – 4:30 pm | SESSION I3: Thursday, September 23 2:30 – 4:30 pm | SESSION J3: Thursday, September 23 2:30 – 4:30 pm |
| Applying New Lighting Technology | Process Energy Optimization | Facility Data Acquisition, Management, and Optimization | New and Emerging Energy Technologies | Demand Response for Transmission Overloads | Competitive Energy/ Energy Services | Fuel Cells | Results of Legislative Initiatives and Pilot Programs for Emission Credits and Green Energy | Maintenance Management | Green Choices, Green Technologies |

DAY THREE ■ FRIDAY ■ SEPTEMBER 24, 2004

| | | | | | | | | | |
|---|--|---|---|---|---|---|---|---|---|
| SESSION A4: Friday, September 24 9:00 – 11:00 am | SESSION B4: Friday, September 24 9:00 – 11:00 am | SESSION C4: Friday, September 24 9:00 – 11:00 am | SESSION D4: Friday, September 24 9:00 – 11:00 am | SESSION E4: Friday, September 24 9:00 – 11:00 am | SESSION F4: Friday, September 24 9:00 – 11:00 am | SESSION G4: Friday, September 24 9:00 – 11:00 am | SESSION H4: Friday, September 24 9:00 – 11:00 am | SESSION I4: Friday, September 24 9:00 – 11:00 am | SESSION J4: Friday, September 24 9:00 – 11:00 am |
| HVAC | International Energy Management and Renewables | Metering | Financing Biomass Projects | Energy Master Planning | Energy Management and Public Facilities | CHP Applications and Technologies | Indoor Air Quality | Including Water Measures in Your EM Programs | A LEEDing Edge for Your Business |

Keynote Brunch for Conference Attendees ■ 11:15 am – 1:30 pm

THREE-DAY, TWO-DAY, AND ONE-DAY SEMINAR OFFERINGS:

- 3-Day Seminar: **Fundamentals of Buying and Selling Energy** / September 21-23 / 9:00 am – 5:00 pm
- 3-Day Seminar: **Fundamentals of Power Quality** / September 21-23 / 9:00 am – 5:00 pm
- 2-Day Seminar: **Skills Update 2005 For Certified Energy Managers** / September 21-22 / 9:00 am – 5:00 pm
- 2-Day Seminar: **Energy Auditing 101** / September 22-23 / 9:00 am – 5:00 pm
- 2-Day Seminar: **Optimizing HVAC Performance** / September 22-23 / 9:00 am – 5:00 pm
- 1-Day Seminar: **Sustainable Lighting Systems** / September 21 / 9:00 am – 5:00 pm
- 1-Day Seminar: **Creating A Strategic Energy Plan** / September 21 / 9:00 am – 5:00 pm
- 1-Day Seminar: **Continuous Commissioning®** / September 21 / 8:00 am – 5:00 pm
- 1-Day Seminar: **Boiler and Steam System Optimization** / September 21 / 9:00 am – 5:00 pm
- 1-Day Seminar: **Using Excel and Interval Meter Data** / September 21 / 9:00 am – 5:00 pm

INNOVATIVE ENERGY PROJECTS AND SPOUSE TOUR OFFERINGS:

- Active Power Factory Tour / September 22 / 11:30 am – 2:30 pm
- Lithonia Lighting Tour / September 22 / 4:00 – 5:00 pm
- Department of Energy CHP Development Project Tour / September 23 / 12:00 noon – 2:00 pm
- The Palmer Events Center Garage PV System Tour / September 23 / 2:30 – 4:30 pm
- Austin's RBJ Health Center Fuel Cell Tour / September 24 / 1:30 – 3:30 pm
- Spouse's Tour of Austin / September 22 / 1:00 – 4:00 pm / \$35.00 fee applies – see registration form

Noted
energy
professionals
who'll
present
key ideas
and new
concepts
at this year's
conference



Colburn



Cordova



Kintner-Meyer



MacCracken



Sain



Hoffner



Bee



Wagner



Al-Ragom



Laidlaw

SEMINARS

Upgrade your professional credentials

Fundamentals of Buying and Selling Energy: A preparatory course for the CEP examination

A three-day seminar / September 21-23, 2004 / 9:00 am - 5:00 pm / Earns 2.0 CEU or 20 PDH

About the seminar: This comprehensive three-day instructional 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 examination. The program covers the full spectrum of topics essential to the energy procurement process, covering both electricity and natural gas from both a purchasing/procurement and a selling/marketing perspective. The CEP exam will be administered on the final day of instruction. In order to sit for the exam, it is necessary to obtain your separate CEP application package by contacting AEE's Certification Administrator at (770) 447-5083, Ext. 223. Note that registering for the three-day seminar does not automatically register you for the CEP exam. An additional fee of \$200 is required for the certification application and exam.

Seminar Outline: Major areas covered by this seminar:

- Legislation, regulation, and energy outlook

- The structure of the electric utility industry
- Purchasing electricity under the new rules
 - Information gathering/aggregation/creating the RFP/ selecting a power marketer, broker, or aggregator/ evaluating bids/negotiating contracts/contract adherence
- The structure of the natural gas industry
- Purchasing natural gas under the new rules
 - Information gathering/aggregation/creating the RFP/ selecting a gas marketer, broker, or aggregator/ evaluating bids/negotiating contracts/contract adherence
- Metering, load profiling, and real-time pricing
- Energy trading and risk management
 - NYMEX, definitions/futures, options, and derivatives/ hedging/risk management/portfolio management
- Fundamentals of gas and electric marketing
 - Producer-generator, transporter, and distributor/LDC tariffs/ answering RFPs/customer relations/account management
- Energy cost avoidance strategies

About the Instructors:

RICHARD J. COSTELLO, P.E., C.E.M., C.D.S.M., C.L.E.P., is president of Acela Energy Group.

JOHN SNELL or DAN CONRATH will co-instruct this seminar with Mr. Costello. Mr. Snell and Mr. Conrath are principals of the firm Risk Management, Inc., which specializes in the use of risk management tools for energy price stabilization throughout the energy industry.

Fees for certification seminar only:

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



Costello



Snell

Fundamentals of Power Quality: A preparatory course for the CPQ examination

A three-day seminar / September 21-23, 2004 / 9:00 am - 5:00 pm / Earns 2.0 CEU or 20 PDH

About the seminar: This comprehensive program is structured to provide the specific training and background information needed by professionals preparing to sit for the Certified Power Quality (CPQ) examination. Whether you aspire to be a knowledgeable buyer of energy, a provider of reliability services, or an energy professional working with new types of energy contracts, you will benefit enormously by establishing your status as a qualified and certified power quality expert. The CPQ exam is administered on the final day of instruction. In order to sit for the examination, you must obtain your separate CPQ application package by contacting AEE's Certification Administrator at (770) 447-5083, Ext. 223. Note that registering for the seminar program does not automatically register you for the CPQ exam. An additional fee of \$200 is required for the certification application and exam.

Seminar Outline: Major areas covered by this seminar:

- Introduction to "power quality"

- Repetitive power system interactions
- Power conditioning technologies
 - Assessing the need for "power conditioning"/matching the problem to the sensitivity of the equipment/use of the ITIC curve to evaluate load sensitivity
- Electrical monitoring objectives (IEEE #1159)
- Grounding and bonding for electrical noise control
 - Use of grounding to control electrical noise/protecting signal systems from "ground loops"/the "equipotential" system of referencing
- Lightning and switching surge fundamentals
 - Surges from lightning/surges from inductive-capacitive coupling of high speed impulses/protecting power and signal pathways/transient protection for digital logic systems
- Harmonic interference on the power system
 - Growing problem of harmonics/solving existing problems/practicing mitigation "before the fact"
- Facility system case studies

- Equipment design and specification recommendations

Practical guidelines**About the Instructors:**

JOHN H. WAGGONER, C.P.Q., currently serves as director of power quality programs, TEGG Service Division, of Sabino Electric, Inc.

DANIEL D. DULL, C.P.Q., has a broad range of experience assisting commercial and industrial clients in reducing operating losses by managing electrical power problems.

Fees for certification seminar only:

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



Waggoner



Dull

Skills Update 2005: An Advanced Program for CEMs

A two-day seminar / September 21-22, 2004 / 9:00 am - 5:00 pm / Earns 1.6 CEU or 16 PDH

About Day One: Many references have recently justified the need to make sure systems are installed correctly, function correctly, interact with other systems, and continue to work well. This seemingly simple statement is extremely difficult to implement. Yet the economics of such efforts are extremely sound. ASHRAE and others have documented that as much as 70% of the time, HVAC economizers are not functioning properly. While percentages aren't always this high, the phenomenon occurs throughout building systems. Dr. Turner feels that much of the time these systems never perform properly, or, if they once did, they quickly fell into disarray. One recent study found over 600 improper installations in one facility. It is obvious that eliminating these problems saves money and makes for more efficient operations.

In the "commissioning" session on Day 1, Dr. Turner will develop a step-by-step procedure to ensure systems are properly installed, testing their functionality, and their ability to interact with other systems. Called "Functional Performance Testing," it is rarely done to the level he proposes. The next phase is "Real Time Commissioning," which draws on the experience and meters left over from the commissioning effort. This course is unique in that Dr. Turner will present complete procedures and checklists for the above procedures.

He will also propose an outline and procedure for developing and updating the "design intent" document.

Seminar Outline: Major areas covered by this seminar:

- Justification
- Commissioning definition and time line
- Design intent
- Commissioning philosophy
- Commissioning documentation
- Functional performance testing
- Procedures and checklists
- **About Day Two:** Dr. Barney Capehart will provide an update on lighting and building envelope improvements, including technology and applications of T5 lighting, LED lighting, and daylighting. Applications to be discussed are T5s, T5 HO lamps, and indirect lighting, as well as exit lights, light capsules, rope lights, and neon signs. Building envelope improvements will also be explored, especially in the areas of high-efficiency windows and roofs. Case studies will highlight many of these areas.

About the Instructors:
BARNEY L. CAPEHART, Ph.D., C.E.M., is a professor emeritus of industrial and systems engineering at the University of Florida, Gainesville. He has broad experience in the commercial/industrial sector, having served as director of the University of Florida Industrial Assessment Center from 1990 to 1999. He has personally conducted over 100 audits of industrial facilities and has assisted students conducting audits of hundreds of office buildings and other non-industrial facilities. He has taught a wide variety of courses and seminars on systems analysis, simulation, and energy-related topics.

WAYNE C. TURNER, Ph.D., P.E., C.E.M., B.E.P., is a professor in the School of Industrial Engineering and Management at Oklahoma State University. As founder and co-director of OSU's Energy Analysis and Diagnostic Center, he has conducted or supervised over 700 building energy audits.

Fees for two-day seminar:

Regular fee: \$1050; AEE member fee: \$950; government and nonprofit fee: \$950; team discount, deduct \$100 per registrant.



Capehart



Turner

Energy Auditing 101: Identifying Cost Saving Opportunities in Plants and Buildings

A two-day seminar / September 22-23, 2004 / 9:00 am - 5:00 pm / Earns 1.6 CEU or 16 PDH

About the seminar: Reducing your utility costs is still one of the most effective and achievable strategies for lowering operating costs at your facility. Completely revised and updated, this seminar is designed to provide you with the fundamental knowledge you need to evaluate how energy is being used in your facility and identify where energy consumption can be reduced. The instructor will place special emphasis on providing useful calculation methods and practical examples to help you evaluate the feasibility of a wide variety of conservation measures. From the specifics of assessing the impact of deregulation on your future energy costs to learning from case studies of successful audits that met their savings goals—this program has it all. Your instructor will emphasize the fundamentals of effective auditing, while putting them in the context of the "big picture"—and the bottom line of achieving meaningful cost savings for your organization.

Seminar Outline: Major areas covered by this seminar:

- The auditing process
- Fuels and utilities
- Analyzing utility data
- Demand-side management strategies
- Case studies
- Meeting your company's financial objectives
- Operation and maintenance audits
- Developing a facility strategy
- Reducing building losses
 - Heating, ventilation, and air conditioning systems
 - Motor system management
 - Boiler systems
 - Distribution and service water heating systems
- Lighting
 - Heat recovery options
- Walk-through audit exercise/Case study

About the Instructor:

BILL YOUNGER, C.E.M., C.E.P., C.D.S.M., has developed and administered energy and resources management activities and training programs for commercial and industrial facility operators and energy professionals for over 15 years. Previously, he managed energy auditing activities, motor system management programs, and provided technical sales support for utility tracking and facility management products for Lineo, Inc., Macro International, and Enron Energy Services.

Fees for two-day seminar:

Regular fee: \$1050; AEE member fee: \$950; government and nonprofit fee: \$950; team discount, deduct \$100 per registrant.



Younger

Optimizing HVAC Performance: Chilled Water and Air Distribution Systems

A two-day seminar / September 22-23, 2004 / 9:00 am - 5:00 pm / Earns 1.6 CEU or 16 PDH

About the seminar: This two-day program is designed to provide participants with all the tools they will need to design, operate, and maintain energy-efficient chilled water and air distribution systems, resulting in optimum HVAC system performance. You will learn how to select the most cost-effective chilled water system for a specific application; how to manage refrigerants to meet mandated CFC reduction requirements; and how you can integrate thermal storage into your chilled water system. Fundamentals of air distribution systems will also be covered in detail, showing you how to select the system best suited to meet ventilation requirements while minimizing energy use. Guidelines will be presented for selecting the best system design and fan types, as well as for implementing effective maintenance and operational strategies. You'll also learn how to retrofit existing systems to improve their performance.

Day One Outline: Optimizing chilled water systems

- Types of equipment
- Refrigerant management
- System design
- Pump and piping basics
- Cooling towers: selection and operation
- Energy efficiency and operational considerations
- System retrofit considerations
- Case studies
- **Day Two Outline: Optimizing air distribution systems**
- System requirements
- Types of systems
- Types of fans
 - System components
 - Energy efficiency and operational considerations
- System commissioning
- Building auxiliary systems
- Case studies: IAQ-CFC retrofit

About the Instructor:

JON R. HAVILAND, P.E., C.E.M., C.L.E.P., is assistant vice president of engineering for Marx/Okubo & Associates, evaluating mechanical and electrical systems in a variety of facilities. He has more than 20 years of experience in facility engineering and management in commercial, institutional, and industrial facilities, as well as six years of experience as a consultant primarily working with existing facilities. He is a member of AEE and ASHRAE, and served as AEE President in 1985.

Fees for two-day seminar:

Regular fee: \$1050; AEE member fee: \$950; government and nonprofit fee: \$950; team discount, deduct \$100 per registrant.



Haviland

SEMINARS

Add to your professional expertise

Sustainable Lighting Systems: High-Performance Building Lighting Workshop

A one-day course / September 21, 2004 / 9:00 am – 5:00 pm / Earns .8 CEU or 8 PDH

About the seminar: Sustainable lighting systems are designed to meet the qualitative needs of the visual environment with the least impact on the physical environment. These systems expand the concept of quality, energy-effective designs by concentrating on the minimum use of resources and by showing a special regard for other environmental concerns. This workshop will show how to minimize the use of lighting energy while maximizing the use of daylighting for interior spaces with a special emphasis on skylights for commercial and industrial spaces. Outdoor site lighting design techniques will show how to avoid "skyglow" and light trespass. Selecting equipment that is durable and maintainable, using sustainable materials and technologies, and encouraging environmentally responsible manufacturing processes will be covered. Sustainable lighting is the key to a

successful LEED project. LEED (Leadership in Energy and Environmental Design) has defined "green buildings" by establishing a common standard of measurement to promote integrated whole-building design practices and recognizing environmental leadership in the building industry. This voluntary consensus-based national standard for developing high-performance, sustainable buildings will be introduced and the current standards discussed.

Seminar Outline: Major areas covered by this seminar:

- Introduction to sustainable lighting
- Daylighting I
- Daylighting II
- Daylight harvesting
- Durable, maintainable, environmentally responsible designs
- Minimizing lighting system energy use, including a LEED

case study

• Outdoor lighting techniques to minimize skyglow

About the instructor:

JOHN FETTERS, C.E.M., C.L.E.P., is a lighting consultant and president of Effective Lighting Solutions, Inc., Columbus, Ohio. Mr. Fetters is a senior member of AEE and chairs the Association's Certified Lighting Efficiency Board. He is a member of the Illuminating Engineering Society (IESNA), and serves on the society's Industrial Lighting Committee, and is past president of the Buckeye Section. He has lectured and is widely published in the lighting field.

Fee for one-day seminar: \$480.



Fetters

Creating a Strategic Energy Plan

A one-day course / September 21, 2004 / 9:00 am – 5:00 pm / Earns .8 CEU or 8 PDH

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

Seminar Outline: Major areas covered by this seminar:

- Key components of effective energy management

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

About the Instructor:

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

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

Fee for one-day seminar: \$480.



Hess

Continuous Commissioning®: Your Most Cost Effective Energy Efficiency Investment After People

A one-day course / September 21, 2004 / 8:00 am – 5:00 pm / Earns .8 CEU or 8 PDH

About the seminar: Learn firsthand Continuous Commissioning® developed at Texas A&M University's Energy Systems Laboratory (ESL). You'll learn from two of today's most successful and experienced commissioning engineers. This technique is increasingly being used by savvy major corporations, federal and state agencies, and medical institutions to improve comfort and significantly reduce utility costs. If you need improvement in any of the following four areas with little or no capital investment, this seminar is for you:

- Reduce persistent hot and cold calls
- Get your O&M program back on track
- Optimize HVAC system performance
- Reduce utilities—with an average 20% savings and two-year payback

Each attendee will be provided a copy of the comprehensive FEMP *Continuous Commissioning® Guidebook* produced by the ESL. This course is based on over 150 successful commissioning projects conducted by the ESL, representing

over \$70 million in cumulative savings. You will learn how to apply these unique and highly effective commissioning procedures costing \$20-70 per square foot. You will also take home no-cost ideas you can implement immediately as well as the names of well informed organizations that use Continuous Commissioning®

Seminar Outline: The six major areas covered by this seminar:

- Fundamentals for Continuous Commissioning®
- Tools and equipment for commissioning
- Ensuring optimum building performance
- Continuous Commissioning® measures for AHUs and VAV's, chiller and boiler systems, thermal distribution systems, thermal storage systems, and automated controls
- M&V for Continuous Commissioning®
- Case studies of actual Continuous Commissioning® projects

About the Instructors:

D.E. CLARIDGE, Ph.D., P.E., is a professor of Mechanical Engineering at Texas A&M, Associate Director of the ESL, co-author of the federal *Continuous Commissioning® Guidebook*, ASME Fellow, and has directed the commissioning of numerous large institutional and medical facilities resulting in millions of dollars in savings.

SONG DENG, P.E., is Assistant Director of the ESL and directs the on-going Continuous Commissioning® of the 18-million-square-foot Texas A&M campus and thermal/cogen plants with over \$30 million in savings since 1996.

Fee for one-day seminar: \$480.



Claridge



Deng

Boiler and Steam System Optimization

A one-day course / September 21, 2004 / 9:00 am – 5:00 pm / Earns .8 CEU or 8 PDH

About the seminar: This intensive one-day workshop is designed for anyone who wants to know how to cut the huge expenses of boiler plant and steam system operations. This workshop has been designed to explore in simple and basic terms those problem areas that waste energy and fuel dollars. The students will be walked through assessment procedures to find and resolve unnecessary losses in any plant. There will be lots of information about where to look and what to do. Also being presented will be time-saving "rules of thumb" and hard facts that cut to the bottom line of profit and energy cost reductions.

Seminar Outline: Major areas covered by this seminar:

- Introduction to boiler and steam system efficiency
- Tackling the BOILER plant
- A quick study in identifying unnecessary fuel loss factors

like control system problems, excessive heat losses, maintenance problems, water treatment, and poor design

- Overview of opportunities that exist in most plants covering a wide range of different fuels
- Rules of Thumb and tables for rapid time-saving analysis
- Instruments to assist in precise plant evaluations
- A concise overview of STEAM system energy problems and opportunities for really large cost avoidance

About the Instructor:

HARRY TAPLIN, P.E., C.E.M., holds three Professional Engineering licenses and an unlimited license for steam, diesel, and gas turbine plants. He has been conducting workshops for over 20 years for the Association of Energy Engineers, the American Society of Mechanical Engineers, The Center for

Professional Development, major utility companies, various universities, and Fortune 500 companies. He has lectured before graduate level engineers, managers, supervisors, and operating personnel on the subjects of thermal plant optimization, steam system management, pollution reduction, waste heat recovery, plant management, and other related subjects. He has conducted studies on or managed boiler optimization programs for more than 1,000 boilers worldwide. He is currently developing promising new technologies to improve boiler efficiency and reduce pollution. He is a graduate of the U.S. Coast Guard Academy.

Fee for one-day seminar: \$480.



Taplin

Using Excel and Interval Meter Data to Understand Loads and Cut Energy Costs

A one-day course / September 21, 2004 / 9:00 am – 5:00 pm / Earns .8 CEU or 8 PDH

About the seminar: This seminar is designed to provide participants with a background in data analysis using information from interval metering and other sources. It involves instruction in using advanced analytical techniques developed by Audin using a Microsoft® Excel spreadsheet. The seminar is designed to work with end users having their laptops in front of them, creating a hands-on training session. Disk-based data taken from existing building interval meters is provided to attendees on a CD-ROM they receive at the seminar and is theirs to keep. Attendees without laptops, however, can still fully grasp the concepts and techniques taught in the seminar. During the seminar, attendees are guided through the basics of energy data analysis, interval metering and equipment, securing/formatting data, and then using it to find opportunities for energy load leveling and cost-cutting measures such as thermal storage, demand response, coincident metering, temperature setbacks, and variable speed drives.

Seminar Outline: Major areas covered by this seminar:

- Introduction
- General benefits from analyzing energy information
- Review of terminology used in data analysis
- Obtaining and understanding basic energy information from bills and meters

Load profiling: why bother?

Software options that make this work much easier

- Basic analysis techniques

Benchmarking using annual units per square foot for electricity and fuels

Sources of data to use for such comparisons

A first glance at monthly energy billing data

The value and limits of degree-day analysis

Simple regression analysis and standard XY scatter plots

Using a mechanical description to deconstruct energy billing data into components

Creating a simple mathematical model/baseline

Using and comparing computer models with real data

- Advanced analysis techniques

Obtaining daily and interval-based energy data

Understanding hourly, daily, and weekly load shapes for electricity and fuel use

How to use Excel to handle energy data

Tweaking Excel to improve results

Moving from two-dimensional graphs to 3D load "landscapes"

Creating a visual baseline using that technique

Focusing on and comparing individual daily profiles

Creating and using date-embedded XY scatter plots

- Using these new techniques

Reviewing interval data from existing buildings

Examples showing impacts of different HVAC and demand response options

Translating what we see into work orders and upgrades that cut energy costs

About the Instructor:

LINDSAY AUDIN, C.E.P., is the president of Energywiz, Inc. (www.energywiz.com), an energy consulting firm. His 25 years of experience in the energy services industry include eight years as energy manager for Columbia University and 12 years with private engineering and energy consulting firms in New York City, prior to founding Energywiz in 1996. Audin has been named Energy Manager of the Year by *Energy User News* and the Association of Professional Energy Managers, International Energy Manager of the Year by AEE, and is a member of AEE's Energy Manager's Hall of Fame. In 1992, he founded the New York Energy Buyers Forum, a nonprofit organization of large energy users. He is a columnist on energy issues for *Architectural Record* and *Engineered Systems* magazines, and is a requested speaker at many national events.

Fee for one-day seminar: \$480.



Audin

EXPO

Expo offers cost-saving technologies and strategies

Plan to exhibit at WEEC 2004

Showcase your products and services to a key decision-making audience to generate sales leads, implement projects, and network with industry professionals. For more information on exhibiting, call Ted Kurkulis, WEEC Exhibit Manager, (770) 271-7869, email ted@aeecenter.org, or visit the AEE website: aeecenter.org/weec.

Collocated HPFE Conference & Expo

Collocated with the World Energy Engineering Congress 2004, the High Performance Facilities Conference and Expo 2004 will offer details on green buildings, high performance buildings, commissioning, improving indoor air quality, and eliminating toxic mold.

Exhibit Hall Workshop Presentations

AEE has added a series of workshop presentations to take place on the show floor. These sessions are FREE to expo-only visitors and all other conference attendees. As presentations are added, they will be posted on the show's official website: www.energy-congress.com. Following are some of the topics and presenting firms as of press time:

2004 Energy Efficient Building Awards, Kevin Heslin, Energy User News
Introduction to Power Harmonics, David Mack, Power Meters, Inc.
Cooling Coil Optimization, Joseph C. Hoose, Flow Control Industries, Inc.
Energy Efficient Motors and Transformers, David T. Brender, Copper Development Association
DFW Airport Central Utility Plant Upgrades, Jonathan M. Schwartz, Carter & Burgess, Inc.
Converting Your Rooftop Load into Energy Producing Assets, Arthur Atlas, Solar Integrated Technologies
Electric Motor Efficiency, James Valigan, Advantus Motor Power Systems, Inc.
Reverse Auction Tools, Knowledge and Expertise for Successful Energy Procurements,
 Rich Domaleski, World Energy Solutions
The Success of Massachusetts Electric Deregulation, Stephen Murphy, Tractebel Energy Services, Inc.
Thermal Solar Power: The Next Phase in Sustainable Power Production, Richard Gontolo, Acela Energy Group
Austin Energy's Thermal Energy Storage Program, Scott Jarman, Austin Energy
Business Opportunities on the U.S.-Mexico Border, Scott Sussman, Texas General Land Office
Managing the Unmanageable: Its \$8 Billion Energy Bill, Michael Tiedeman, Veridion Corporation
Leveraging Your Green Power Purchase: A Retail Example, Scott Martin, Green Mountain Energy
Making Waste Productive, Mike Garza, Nevada-SBE, LLC
An Introduction to Cool Roof Finishes for Metal, John H. Kelly, The Valpar Corporation
Training for IAQ with Energy Efficiency, Tiffany Kiehl, The Cadmus Group
Presentation Title to be Announced, Tyrone Foster, SENTRYCH, Inc.
Cost Effective Solutions for Commercial and Industrial Cooling Applications, Gary R. Hilberg, TAS Packaged Services, Ltd.
Cool Cogeneration for Commercial Applications, Nitin Pathakji, Broad USA, Inc.
Practical Applications of LEED in Energy and Atmosphere, Zaida Basora Hagar, City of Dallas
Applying Geothermal Cooling and Heating, Rose Dowdy, ELink Geoservice Services, Inc.
Smart Infrared Thermography: Enhanced Condition Monitoring & Surveillance,
 Paul Czerpeszko, Flir Systems
Power Quality & Power Factor: Issues & Solutions, Scott Schindlbeck, Espco North America, Inc.
Creating a New Industrial Energy Future: Future 100 Case Studies, Scott R. Laidlaw, Cnergy Solutions
Replacing HID with TSHD, David W. Parkansky, Aland
Cooling Capacity Safety Factor, Earl C. Rudolph, Calmae Manufacturing Corp.
TEX: The New Generation of Storage Technology, John Sears, Jectry Power, Inc.
Case Studies: Submetering Applications, Donald Millstein, E-MON, a Hunt Power Product
ES&N: New Construction, and Energy Security, Phillip Smith, Sempco Energy Solutions
Successful Energy Management in Schools and Retail Structures, Jim Conradi, Airchange
Presentation Title to be announced, Name to Come, Summit Technology, Inc.
Presentation Title to be announced, Name to Come, Company to come
Presentation Title to be announced, Name to Come, EarthPower Systems LLC
Case Study: Applying Energy Information, John Van Corp, Power Measurement, Ltd.
AMR - Demand and Consumption Case Study, Bob Nelson, City Public Service of San Antonio
Maximizing Chiller Efficiency, Don Clark, Efficiency Technologies, Inc.
Synchronized Solutions for Energy Type of Facility, Scott Koving, Prime Wireless, Inc.
How Can Our Schools Save \$450,000 Millions in Energy Costs-Every Year? Larry Letzawa, Mapagray International
Total Energy Recovery Technology for High Performance Buildings, Doug Haas, SEMCO, Incorporated
The Benefits of Inverter Technology in Air Conditioning Systems, Lee Smith, Daikin U.S. Corporation
Presentation Title to be announced, Name to Come, Whelan Investments
Presentation Title to be announced, Name to Come, Company to come
Presentation Title to be announced, Name to Come, Company to come

WEEC 2004 FLOORPLAN
 AUSTIN CONVENTION CENTER • HALL 4

SHOWCASE YOUR PRODUCTS & SERVICES
 Secure your booth space in the WEEC Expo
 Call Ted Kurkulis at (770) 271-7869 or email: ted@aeecenter.org
 or visit the website: www.aeeecenter.org/weec

2004 EXPO HOURS
 Wednesday, September 22 • 11:00 am-7:00 pm
 Thursday, September 23 • 10:00 am-4:00 pm

EVENTS

These special offerings highlight Congress week

Systemwide Cooling Efficiency Workshop

PRECONFERENCE: Tuesday, September 21, 2004 / 1:00-4:00 pm

FCI will present a free seminar showing uncommon but highly effective methods for assessing and optimizing cooling system performance. The vast majority of large chilled water systems circulate two to three times the needed water for cooling, "Low delta T" is a source of considerable wasted energy, lost capacity, and thermal instability in many facilities, new and old. Some of the most prominent universities, airports, hospitals, and labs in the U.S. are adopting a simple new approach. The following topics will be discussed:

- Simple tools and metrics for total system evaluation
- Performance benchmarks to evaluate your facility
- Assessment of capacity, energy, and thermal issues
- Specific items that may lead to sub-optimum performance
- Ways to dramatically reduce capital and operating expenses

To register for this free seminar, please use the Special Events section on the Registration Form. For more information contact Joseph C. Hoose, Director of Sales, Flow Control Industries, Inc. at (716) 763-0295 or email jhoose@flowcontrol.com.

Smart Energy Industry Roundtable

PRECONFERENCE: Tuesday, September 21, 2004 / 1:00-4:00 pm

Good Company Associates will host an industry roundtable to outline a vision for smart energy technologies and their future impact on utilities nationally. Smart energy refers to a wide range of emerging information-based products and services that can improve customer service and help utilities and customers better manage energy while generating the savings to pay for the improvements. Texas is fertile ground for the growth of such distributed intelligence within both the equipment/appliance and utility industries, due to the size of its market, resources, and strong presence of energy, information technology, and telecommunications companies. The Texas legislature is presently considering adopting a new vision for accelerating the use of such intelligent systems and technologies. The roundtable will include industry executives, thinkers, and policymakers who will discuss how information and communications technologies can lead to wiser use of our existing energy resources and infrastructure (improve reliability, decrease prices, conserve energy, and enhance energy security) while helping to launch a larger digital home revolution. Session moderator will be Bill Richards, Title & Company to come. Panelists will include Ward Camp, Vice President of Regulatory & Strategic Alliances, Distribution Control Systems, Inc.; Jeff Greenwell, Vice President of Sales for Iron; Dan Price, President of MeterSmart; Bill Richards, Asset Monitoring Leader, Americas, IBM Corp.; and Stephen Smith, Vice President of Sales, Honeywell Utility Solutions. Register for this free seminar by using the Special Events section on the Registration Form.



Camp



Price



Richards

CGD Certification Program Offered

The Geothermal Heat Pump Consortium (GHPC), the International Ground Source Heat Pump Association (IGHSHA), and the Association of Energy Engineers (AEE) have teamed up to present a certification program for GeoExchange Designers (CGD). The preparatory two and one-half day seminar will be presented on September 22-24 in conjunction with the WEEC in Austin, with the certification exam administered on the afternoon of the third day. To register for this seminar, please contact Kerl Shirley at (800) 626-4747, or email shirley@okstate.edu. apply for the CGD exam, contact Leslie Walcher at (770)447-5083, Ext. 223, or email her at leslie@aeecenter.org.



New Poster Sessions at WEEC 2004

Wednesday from 11:00 am-7:00 pm / Thursday from 10:00 am-4:00 pm

Complementing the WEEC conference, expo, and related events, new poster sessions will provide an opportunity for authors, conference attendees, and exhibit hall visitors to interact, and give and receive ideas on a one-on-one informal basis. Posters will be displayed in exhibit hall during expo hours. Authors will be available for Q&A on Wednesday between 11:30 am-12:30 pm and from 4:30-5:30 pm, and on Thursday from 11:00 am-12:00 noon, and from 1:30 pm-2:30 pm.

SESSION P51: Poster Session / Wednesday, September 22

Power Conundrums: Electrical Resources in the New York City Load Pocket
 MICHAEL F. BOBKER, M.S., C.E.M., Director of Strategic Planning, Association for Energy Affordability

Resource Efficient Buildings—Balancing the Bottom Line/Case Studies on LEED-CI
 MITCH J. BOUCHER, P.E., Project Manager, Haworth, Inc.

Turning Backup Generators into Green Engines with Biodiesel

LARRY B. BARRETT, President, Barrett Consulting Associates

Thermal Energy Storage: Benefits and Examples in High-Tech Industrial Applications

JOHN S. ANDREPOINT, President, The Cool Solutions Company

Relying on Fuel Cells for Emergency Backup Power

JIM NERSCHOOK, Program Manager, Plug Power Inc.

Proposal Strategies to Acquire Energy Business

KENNETH ERDMAN, M.Sc., Senior Property Manager, GWL Realty Advisors, Inc.

DFW Airport Central Utility Plant Upgrades

JONATHAN M. SCHWARTZ, P.E., C.E.M., LEED, Project Manager, Carter & Burgess, Inc.

SESSION P52: Poster Session / Thursday, September 23

Global Emission Trading: Opportunities and Challenges for ESCO's

BRUCE K. COLBURN, Ph.D., P.E., C.E.M., Chief Operating Officer, EPS Capital Corp.

Challenges and Opportunities for Fuel Cells in Stationary Applications

SURESH SRIRAMULU, Associate Principal, TIAX LLC

UT Austin 25MW Generation Addition

SCOTT P. CLARK, P.E., C.E.M., Vice President, Carter & Burgess, Inc.

University Retirement Community Davis: A Cogeneration Case Study

THOMAS DAMBERGER, Ph.D., C.E.M., President, Golden State Energy

Building Retro-Commissioning Texas Style

DAVID J. SNYDER, Program Manager, CenterPoint Energy

How to Implement: Best Practice Energy Management Plan for Your Organization

RONALD GREEN, P.E., President, Energy Integrators, Inc.

A Decade of Improvement at the University of Cincinnati CHP+TES+Gas Cooling = Savings & Flexibility

JOE HARRELL, P.E., C.E.M., Assistant Director of Utilities, University of Cincinnati

The Three Critical Areas an End User Must Address to Reduce Overall Energy Costs

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

Meet the Authors

A cross section industry book authors will be on hand at the AEE Books booth to give insight into their publications and interact on a one-on-one basis with their readers.

Texas Chapters Host Reception

Tuesday, September 21, 2004 / Austin Convention Center

AEE chapter officers: Come to town early, get over your jet lag, and get ready for the BIG SHOW. The Texas Chapters of AEE are hosting all AEE chapter officers and the national AEE leadership team at a reception. Food and beverages will be provided plus a cash bar. Please RSVP to Carol Harwell, President, Austin/San Antonio Chapter, at Carol.Harwell@austintexas.aee.org or call her at (512) 322-6562.

EVENTS

Opportunities during Energy Week in Texas

Baxter announces International Energy Managers meeting

Corporate Leader Spotlight:



The Association of Energy Engineers is pleased to announce that Baxter Healthcare Corporation has selected World Energy Engineering Congress 2004 as their location to hold the Baxter Energy Engineering Conference. The Baxter Conference is held every two years and is a global conference. Previously, Baxter has had over 70 people in attendance, representing 41 facilities from over 20 different countries. At least one representative from each of the company's facilities is to attend this year's meeting. The conference is said by Baxter senior management to add significant value and save energy costs, and they have given their full support to the program initiative. By collocating with the WEEC, key Baxter employees and decision-makers will be able not only to share their experiences with other team members, but will also have the opportunity to network with the cross-section of equipment vendors, service providers, industry speakers, and other conference attendees who typically participate in the event.

representing 41 facilities from over 20 different countries. At least one representative from each of the company's facilities is to attend this year's meeting. The conference is said by Baxter senior management to add significant value and save energy costs, and they have given their full support to the program initiative. By collocating with the WEEC, key Baxter employees and decision-makers will be able not only to share their experiences with other team members, but will also have the opportunity to network with the cross-section of equipment vendors, service providers, industry speakers, and other conference attendees who typically participate in the event.

Energy User News presents the 2004 Energy Efficient Building Awards



The Energy Efficient Building Awards recognize innovations in building management and energy efficiency and reliability—in either retrofits or new construction throughout North America—that provide unique building solutions and also achieve significant energy and cost savings.

Nominations are accepted from product manufacturers, building owners, energy managers, and consultants. Award winners will be selected in categories recognizing specific technology applications and overall building efficiency. In addition, an Energy Manager of the Year will be honored during this event. This year, the awards will be presented on Wednesday, September 22, 2004, on the show floor during World Energy Engineering Congress. Winning installations will be announced and profiled in the October 2004 issue of *Energy User News*. For more information contact: Jill L. DeVries at (248) 244-1726, or email devries@bnpmmedia.com.

5th annual Combined Heat and Power Roadmap Workshop



The 5th Annual Combined Heat and Power (CHP) Roadmap Workshop will be held September 20-21, 2004, at the Austin Airport Marriott South. Don't miss this opportunity to track and celebrate the progress on the "road" to 92 GW of CHP in the United States by 2010. This workshop, which is sponsored by the U.S. Combined Heat and Power Association (USCHPA), the U.S. DOE, and the U.S. EPA CHP Partnership, will include optional site visits to CHP installations, a celebratory reception, networking opportunities, and much more. For more information, visit the event website located at www.energetics.com/5thchpworkshop/. The *National CHP Roadmap* publication can be downloaded at the USCHPA's website at www.uschpa.org.

EPA's ENERGY STAR Showcase



Visit the ENERGY STAR Buildings Showcase slide show in the exhibit hall lunch area during the conference. Learn about ENERGY STAR tools and resources, and discover how organizations have improved their energy management and reaped the financial benefits of superior energy performance. The U.S. EPA ENERGY STAR program provides resources to a network of commercial, industrial, and institutional end users and energy service and product providers to help businesses achieve operational excellence through improved energy management. Thousands of organizations have used these resources, including ENERGY STAR's Portfolio Manager, to rate the energy performance of their facilities. Nearly 2,000 buildings have been recognized for superior energy performance with the ENERGY STAR label, a number of which will be featured at the showcase.

management and reaped the financial benefits of superior energy performance. The U.S. EPA ENERGY STAR program provides resources to a network of commercial, industrial, and institutional end users and energy service and product providers to help businesses achieve operational excellence through improved energy management. Thousands of organizations have used these resources, including ENERGY STAR's Portfolio Manager, to rate the energy performance of their facilities. Nearly 2,000 buildings have been recognized for superior energy performance with the ENERGY STAR label, a number of which will be featured at the showcase.

EPA's Green Power Partnership Luncheon



On September 21, EPA's Green Power Partnership will honor all Texas Green Power Partners at a luncheon recognition event held prior to the WEEC. The Green Power Partnership includes about 120 partners in Texas. Collectively, the Partnership represents commitments to purchase over 1.2 billion kilowatt hours of green power annually. Green Power Partners are commercial, industrial, and public sector organizations that pledge to procure an amount of renewable energy proportional to their annual electricity use. Green power is electricity generated from resources such as solar, wind, geothermal, biomass, and low-impact hydro facilities. Conventional generation, based on the combustion of fossil fuels, is the nation's single-largest industrial source of air pollution. The increasing availability of green power enables electricity customers to accelerate installation of renewable energy technologies. As more green power sources are developed—displacing conventional generation—the overall environmental impacts associated with electricity generation will be significantly reduced. For more on the Partnership, visit www.epa.gov/greenpower/index.htm.

The Roundup caps energy week



If you are coming to Austin for WEEC 2004, plan to extend your stay and broaden your exposure to the growing area of renewable energy and efficiency and to central Texas. The Renewable Energy Roundup and Green Living Fair, which will be held on September 24-26, boasts thousands of visitors annually and has the widest variety of exhibitors and presenters of any event of its kind in the southern United States. The Renewable Energy Roundup exhibit features over 75 companies, organizations, and agencies involved in renewable energy, green building and remodeling, organic growing, and renewable and electric fueled vehicles. Four speaker tents on the grounds feature continuous concurrent lectures and mini-workshops. Add in the great food and drink, along with a number of family entertainment activities, and you've got one fun and informative way to spend a day or more. Finally, the Roundup is a fine reason to take a drive into the heart of Texas Hill Country. It takes place in a beautiful outdoor park in the center of historic Fredericksburg, just 78 miles west of Austin. Tickets are available onsite for \$8 per day or \$16 for a 3-day pass. For more details on this informative and enjoyable event, visit www.TheRoundup.org.

Texas A&M's ESL offers two workshops on energy code



In conjunction with WEEC 2004, the Energy Systems Laboratory (ESL) at Texas A&M University is offering two workshops on the new energy-efficient building code that became law as part of Texas Senate Bill 5. Courses have been updated to assist participants seeking certification for energy code inspection or plan review through the International Codes Council.

Workshop 1: TUESDAY, September 21—8:30 am-4:30 pm
Commercial Requirements of the International Energy Conservation Code (IECC)

This seminar provides basic information that building officials, inspectors, and design professionals need to enforce or comply with the commercial energy provisions in chapters 1, 2, 3, and 8 of the IECC. Discussion covers basic requirements, available compliance approaches, and plan review or inspection actions needed to assure compliance. Program objectives include understanding of the requirements for alterations, additions or repairs, building envelope, mechanical systems and service water heating, electrical power and lighting, building services systems, and compliance inspection. The program is designed for building officials, inspectors, plan examiners, architects, engineers, contractors, and suppliers. Tom

Fitzpatrick, R.A., an energy code specialist with Texas A&M's ESL, will be the instructor. Preregistration cost is \$175; onsite registration on the day of the seminar is \$195.

Workshop 2: FRIDAY, September 24—8:30 am-4:30 pm
Compliance with ASHRAE Standard 90.1-1999/2001

This ASHRAE provision is the standard referenced for design of commercial buildings in the IECC with 2001 Supplement as adopted in Texas. The U.S. DOE is currently reviewing the ASHRAE standard prior to adopting new benchmarks for state energy codes. Texas SECO has already established the 2001 edition as the standard for state-owned buildings. In addition to the course manual, attendees will be able to purchase Standard 90.1-1999 or 2001 and the appropriate User's Manual. The program is designed for engineers, architects, code officials, energy and facility managers of state agencies, higher education, local government, and school districts. Two instructors from ESL staff, faculty, and consulting designers will be chosen from Tom Fitzpatrick, Jeff Haberl, or John Bryant. The workshop is funded through an award to SECO by the U.S. DOE's Special Projects Program.

For information or reservations, go to <http://eslsb5.tamu.edu> and go to the "Training" section. For answers to any questions on the workshops, please contact Shirley Muns, at smuns@esl.tamu.edu, or phone her at (979) 845-7882.

TOURS

Highlighting innovative energy projects

Active Power tour highlights new technology

Wednesday, September 22, 2004 / 11:30 am - 2:30 pm

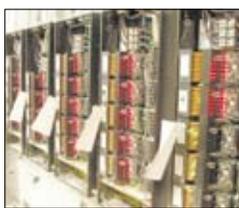
Active Power, the leading manufacturer of flywheel-based UPS products, will provide a tour of their Austin manufacturing plant for WEEC attendees. Participants will view the largest flywheel UPS plant in the U.S. and see production models up to 1200 kVA. Highlight of the tour will be the first-ever public demonstration of Active Power's newest battery-replacement technology. Bus transportation and lunch will be provided. The tour will be limited to 120 persons, so early registration is advised. Participants will meet in front of the registration area at 11:15 am to access transportation provided for the tour.



Lithonia Lighting spotlights lighting concepts

Wednesday, September 22, 2004 / 4:00 - 5:00 pm

The Austin Convention Center is one of the larger projects that incorporates Lithonia Lighting's concept of lighting management using advance technologies controlled by a simple user interface. A unique part of the project is the daylight harvesting system in the atrium of the newer section of center. This session will provide an overview of the lighting control system, lighting control strategies for other applications, and a tour to include local room controls and the central control. Participants will meet in front of the registration area at 3:45 pm to pick up transportation provided for the tour.



Team develops DOE CHP development project

Thursday, September 23, 2004 / 12:00 noon - 2:00 pm

Burns & McDonnell teamed with Solar Turbines, Broad USA, and Austin Energy to develop a modular CHP system that integrates onsite power generation and a thermally activated absorption chiller to serve a high-technology business campus. The project is the first of its kind utilizing an exhaust from the 4.5 MW combustion turbine to indirectly fire a 2500-ton, two-stage absorption chiller. The modular CHP system has an efficiency of more than 70%. The turbine generator provides onsite reliable power to local high-tech businesses, runs parallel with the Austin Energy grid, and is available for ERCOT dispatch when needed. The absorption chiller provides 2500 tons of chilled water to the Business Park, provides "free cooling" during peak demand and reduces the need to run existing electrical centrifugal chillers. Representatives from the project team will be available to answer questions about the project and its applicability for other sites such as hospitals, universities, airports, or similar large corporate or government campuses. Participants meet in front of the registration area at 11:45 pm.



Palmer Events Center Garage PV System tour

Thursday, September 23, 2004 / 4:30 - 5:30 pm

This PV system consists of 240 PV modules manufactured by Shell Solar, each with a rating of 150 watts, and 14 inverters manufactured by SMA-America, Inc. The modules, which are single-crystal silicon, are arrayed over the south row of parking spaces to provide some shading for parked cars. Thirteen of the inverters are wired to 18 modules each, and the 14th inverter is wired to 6 modules. Inverter input voltage is 300 volts, and output voltage is 208 volts AC. Power is fed from the inverters to an electric panel serving both the garage and the Palmer Events Center. Participants in the tour of the Garage PV System meet in front of the registration area at 4:15 pm.



Tour information continues on p.14

SHOWCASE

Presenting the latest products and services

Invitation: You are invited to visit the expo to see firsthand the latest technologies, products, and services available now that can improve the productivity of your operations while slashing costs. The following list is a partial listing of exhibitors as of July 15, 2004. *Note: This list is subject to change without notice and AEE is not responsible for omissions, errors, or claims regarding products or services listed.*

ACI POWER SYSTEMS

ACI Power Systems is an energy savings manufacturing company that uses a unique cutting-edge methodology for improving the efficiency of low power factor motors, compressors, and home electrical panels. Our cutting-edge engineering process is unique, so don't miss our booth.



ACTIVE POWER

Active Power, Inc. has carefully developed its business to become the leader of battery-free uninterrupted power solutions to meet the global demand for critical backup power. With 35 issued patents, Active Power delivers power quality products by integrating unique mechanical and electrical innovations into compact, reliable, and cost-effective systems. Superior research, development, and assembly facilities enable Active Power to meet aggressive growth targets and assure rapid delivery to end users. Over 127,000 sq. ft. of dedicated space for assembly and test provides a predictable flow of fully tested and qualified systems that are configured to meet individual customer requirements.



ADVANCED MOTOR POWER SYSTEMS, INC.

AMPS, Inc. is a distributor for Motorboss, the first truly intelligent electric motor controller. Motorboss can provide numerous immediate and lasting benefits including: soft start, optimization, soft stop, improved power factor, lower maximum demand, improved reliability, and increased production. With a blend of reduced electricity costs and increased efficiency, Motorboss can provide a very attractive payback proposition.



AIRXCHANGE

Demonstrating leadership through proven performance, Airxchange entrepreneurial spirit has fostered new ideas and led to significant improvements in energy recovery ventilation systems. Unique, patented, UL Listed designs, and ARI certification set the standard for cleanability, ease of maintenance, and the assurance of long-term performance. The company is committed to industry growth; their personnel serve on numerous industry standards committees, including UL, CSA, and ASHRAE, and have played leadership roles in developing product certification programs at both the Home Ventilating Division of AMCA and the Air Conditioning and Refrigeration Institute. Over 20 years of research in lightweight effective designs and experience in more than 80,000 field applications support Airxchange's commitment to manufacturing excellence.



ALANOD

At ALANOD, the company specializes in the production of surface coatings of aluminum coils which can then be used in the lighting, car, and computer industries as well as for decorative applications.



ALLIANCE TO SAVE ENERGY

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

AMERESCO, INC.

Ameresco is an independent energy solutions company delivering long-term customer value through innovative systems, strategies, and technology.

AMTECH LIGHTING SERVICES

Amtech Lighting Services provides comprehensive illumination programs that significantly reduce long-term energy and maintenance costs. Among these services are relamping, fixture cleaning and periodic maintenance of lighting systems, as well as the design, installation, and repair of outdoor signage. For its exceptional efforts and achievements in energy conservation, Amtech has been honored as a Green Lights Ally by the U.S. Environmental Protection Agency. Amtech Lighting operates 27 full-service branch offices nationwide.



ARMSTRONG SERVICE, INC. (ASI)

Armstrong Service, Inc. is a subsidiary of Armstrong International, Inc., which has provided a century of energy management expertise for industrial, institutional, and commercial facilities worldwide. ASI can help your global business save money, and can free up time and resources you can apply to your core operations.



ASSOCIATION OF ENERGY ENGINEERS®

AEE is your gateway for information on the dynamic field of energy efficiency, energy services, deregulation, facility management, plant engineering, and environmental compliance. Entering its 28th year of serving its members, AEE is dedicated to remaining in the forefront of an ever-changing interrelated network of industries. With a full array of information outreach programs from technical seminars, conferences, books and journals, to critical buyer-seller networking trade shows, the Association offers a variety of information resource tools. As a growing membership organization, the overall strength of AEE is highlighted by a strong membership base of over 8000 professionals and recognized certification programs, including Certified Energy Managers (CEMs), lighting professionals, indoor air quality professionals, and cogeneration professionals. AEE's network of 67 local and regional chapters has powerful grassroots agendas and members. Further, the Association's roster of corporate members is a veritable "who's who" of the commercial, industrial, institutional, governmental, energy services, and utility sectors.



AUSTIN ENERGY

Austin Energy is a community-owned electric utility and a department of the City of Austin. The utility's goal is to provide you with world-class customer service.

BOMA TEXAS

The Texas Building Owners and Managers Association (Texas BOMA) represents the interest of owners and managers of commercial real estate in the state of Texas. The Association's objectives include impac-

ing legislation and regulatory and code development, to establish Texas BOMA as a knowledgeable, competent, source for legislatures and regulatory agencies, and to provide timely, affordable seminars for members and effective forums for networking.



BROAD U.S.A., INC.

BROAD Air Conditioning Co., Ltd. is the biggest absorption chiller manufacturer with the most edge-cutting technologies in the world. BROAD is headquartered in Beijing, China, and the company's manufacturing base is situated in Changsha (the capital city of Hunan Province), China. Established in 1988, BROAD has 1600 employees. Today, BROAD's products are in more than 30 countries. In China, the U.S., Germany, Spain, France, and so on, Broad chillers are No. 1 choice in the industry.

BUILDING OPERATING MANAGEMENT

BUILDING OPERATING MANAGEMENT

Building Operating Management is the nation's leading new construction, renovation, and facilities management magazine for 70,000 commercial and institutional building owners and facility executives. Each issue provides information on products and strategies that make the building more secure, more productive, and more competitive. Free subscriptions are available to qualified individuals.



BUILDING OWNERS & MANAGERS ASSOCIATION OF AUSTIN

BOMA Austin is an active professional association with a membership including commercial property owners, property managers, and vendor service and support companies. BOMA is currently 254 members strong, representing nearly 200 professional companies. BOMA Austin provides the highest ethical and professional standards in the commercial real estate industry and supports its members in the community through advocacy, networking, and education.



BURNS & McDONNELL

With a staff of more than 1700, Burns & McDonnell is an international engineering, architectural, construction, and environmental services firm with offices worldwide. Burns & McDonnell provides planning, design, program management, and construction services for commercial airport, airline, and military projects around the world.



CALMAC MANUFACTURING

CALMAC ICEBERK™ thermal energy storage product line, with over 3000 installations worldwide, dramatically reduces cooling costs by shifting all or a portion of the cooling load off peak period. CALMAC's ICEBERK™ product stores ice, generated with efficient nighttime electricity, which is used to help cool the building. Cooling generated with nighttime electricity saves money, valuable resources, and reduces greenhouse gas emissions.

Carter & Burgess

CARTER & BURGESS

Established in 1939, Carter & Burgess is a client- and market-focused engineering and architectural firm. Services include traditional E&A services, planning, including infrastructure planning, programming, condition assessment, program management, and construction management. The dedicated Energy & Power Solutions Group provides a broad range of services including energy audits, energy retrofits, district energy plants, cogeneration systems, distributed generation and power, infrastructure upgrades, energy procurement, and power quality assessment.

CENTRAL TEXAS METAL ROOFING SUPPLY CO. INC.

Central Texas Metal Roofing Supply has the largest selection of colors, profiles, and gauges in Texas.



CHEMWORKS FILTRATION

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



CINERGY SOLUTIONS

Cinergy Solutions focuses on cogeneration, energy services, and utility outsourcing for large industrials, municipalities, universities, and other large energy consumers. As a single source for complete energy and utility services, Cinergy maximizes energy, utility, and capital efficiency to provide its customers with reliable, lowest onsite power.



◊ cingular fits you best™

CINGULAR INTERACTIVE

Cingular Wireless, a leader in mobile voice and data communications, serves over 24 million customers across the U.S. Cingular launched the world's first commercial deployment of wireless services using Enhanced Data for Global Evolution (EDGE) technology. Cingular provides service in 43 of the top 50 markets nationwide and provides corporate e-mail and other advanced data services through its GPRS, EDGE, and Mobitex packet data networks.



CITY PUBLIC SERVICE

CPS is the nation's largest municipally owned energy company providing both natural gas and electric service. Acquired by the city of San Antonio in 1942, CPS serves more than 60,000 electric customers and more than 300,000 natural gas customers in and around the 9th-largest city in the U.S. Proceeds from CPS remain in San Antonio and account for more than one-fourth of the city's annual operating budget for police and fire protection, street improvements, parks, and other services. CPS has earned the highest financial rating of any electric system in the nation. Our mission is to provide and deliver competitive energy products and services to meet the changing expectations of our customers.

COGENERATION & ONSITE POWER PRODUCTION MAGAZINE

Cogeneration & Onsite Power Production—the magazine and the website—is dedicated to providing international coverage of cogeneration technology, economics, deregulation, the environmental framework, and more. The magazine is distributed to cogeneration professionals and key buyers in both the public and private sectors worldwide. It presents highly targeted opportunities for advertising. Advertisers will also get prioritized position in the on-line international suppliers database.

CONVERGE

Converge supplies the solution platforms that innovate energy management. More than 500 customers in 15 countries trust our reliable, end-to-end energy intelligence solutions. We power scalable information infrastructures with our robust PowerCamp software suite, combined with our field-proven hardware development and manufacturing expertise—all custom-designed and individually deployed to meet the unique needs of today's energy suppliers. Converge's mission is to be the premier provider of innovative energy intelligence and infrastructure for energy suppliers and their customers; it will accomplish this through development and deployment of virtual peaking capacity programs, load management and control systems, backup capacity and real-time energy data collection and management, as well as other initiatives to reduce energy costs and improve distribution system reliability.



CONSTELLATION NEWENERGY

Constellation NewEnergy is a competitive energy supplier serving commercial and industrial customers throughout North America. We are a wholly owned subsidiary of the Constellation Energy Group (NYSE: CEG), a Fortune 500 company based out of Baltimore, MD. Our experience in the competitive energy markets, outstanding customer service, customized products and solutions, and the strong values behind our business make us North America's leading competitive energy supplier.



CONTROLOTRON

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



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.

COSATRON.COM

CRS Industries, Inc. has manufactured the CosaTron contamination control system for over 45 years. Founded in 1958, CRS has devoted its existence to training and education while providing improved indoor air quality throughout the world. Located in a 40,000-sq-ft facility in Tampa, FL, that houses accounting, engineering, sales and marketing, manufacturing, research & development, and a state-of-the-art laboratory with two test chambers, the CosaTron family of products continues to meet the ever evolving needs of the HVAC and IAQ industries. CRS recently introduced the EXCITOR™—a residential version of CosaTron, enabling you to experience and enjoy the same superior indoor air quality utilized by commercial facilities around the world. Now, superior indoor air quality is available from CRS Industries...cleaning the indoor air where you live, work, play, and breathe.



CPFILMS, INC.

Lumar solar control window film rejects up to 79% of the sun's heat, 99% of damaging ultraviolet rays, and minimizes glare. Occupant comfort and space utilization are increased while energy costs are decreased. Low E, safety, solar/security combinations are also available. The product is professionally installed to interior window surfaces with minimal disruption. A manufacturer's warranty is offered.



DAIKIN U.S. CORPORATION

Daikin is the only company in the world dedicated to manufacturing both air conditioning systems and refrigerants. Therefore, we develop and optimize every component within our same system. For more than 80 years, Daikin has been manufacturing and supplying advanced, high-quality air conditioning equipment for residential, commercial, and industrial applications. Our commitment to the U.S. market began in 1963 with the manufacture of fluorine chemicals. Today our commitment is stronger than ever, and our presence is growing with the establishment of regional air conditioning operations in the U.S.

DEFENSE SUPPLY CENTER PHILADELPHIA

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

DIVCON/DELTA CONTROLS

Divcon EMS is Dallas/Fort Worth's premier Delta Controls building automation contractor. The design, implementation, and support of state-of-the-art/distributed intelligence based building automation systems is our only business. Unlike many of our competitors, whose core business is really HVAC service, chiller change-outs, and plumbing, they also sell energy management systems. Providing and servicing the new state-of-the-art building automation system, you must stay focused on the business. At Divcon EMS, our mission is to provide our customers with cost-effective solutions to meet their exact building automation system requirements. We strive to accomplish through technology, innovation, and award-winning personal service.



DURO-LAST ROOFING, INC.

"The World's Best Roof™" Duro-Last Roofing, Inc.®, the largest thermoplastic single-ply roofing manufacturer in the U.S., produces a pre-fabricated, reinforced, single-ply roofing system with a written 15-20-year warranty that provides commercial and industrial (flat or low-slope) buildings with maximum protection. An ENERGY STAR® rated product, energy-efficient, extremely durable, and easily installed by licensed contractors, the CoolZone™ Duro-Last® Roofing System™ "The World's Coolest Roof™" is virtually leakproof and maintenance-free. A Duro-Last® roof can be custom-fabricated to your building's exact dimensions. A Duro-Last® roof eliminates leaks, reduces energy costs, is chemical and fire resistant, and is protected by the industry's best manufacturer's written warranty. Duro-Last® roofing has over 25 years' experience, nearly 2000 authorized dealer/contractors, over 100,000 projects, and over 850 million sq. ft. of membrane installed throughout the U.S., Canada, and the Caribbean. The company is proud to be a member of the U.S. Green Building Council and the Cool Roof Rating Council.

SHOWCASE

To exhibit at the show, call (770) 271-7869



ELECTRIC UTILITY MARKET MANAGERS OF TEXAS

TXU Electric Delivery is TXU Corp.'s regulated energy delivery company. Serving one-third of the state of Texas, TXU Electric Delivery delivers electricity to the residential and business consumers of retail electric providers. We offer access to one of the largest energy infrastructures in the world—more than 14,000 miles of electric transmission lines and 97,000 miles of electric distribution lines.



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

E-Mon manufactures a full line of electronic digital kilowatt hour/demand meters for monitoring electricity in commercial, industrial, and residential applications. Metering options include automatic meter reading, tenant billing and demand profiling, time of use, load profiling, power quality, per-phase kW, volts, amps, power factor, KVAR, KVA, local, and remote readings.



EARTH PROTECTION SERVICES, INC. (EPSI)

Earth Protection Services, Inc. is a nationwide provider of recycling and proper disposition services for electronic products such as mercury-containing fluorescent lamps, PCB and non-PCB ballasts, batteries, computer monitors, and peripherals.

EFFICIENCY TECHNOLOGIES, INC.

Chillers are the single-largest energy-using component in most facilities, and can typically consume over 50% of the electrical usage. Chillers run inefficiently, resulting in substantially higher energy costs, decreased equipment reliability, and shortened lifespan. A chiller operating at 70% efficiency can consume approximately 30% more energy to produce the same cooling. The slightest decrease in chiller performance can have a major impact on efficiency. For instance, a 1°F increase in condenser water temperature can decrease chiller efficiency by 2%. Efficiency Technologies, Inc. has developed a state-of-the-art, easy-to-use online diagnostic service called EffiTrack™ that gives you and your maintenance team the ability to document, monitor, evaluate, and manage centrifugal chiller system performance. Combine this powerful tool with our consulting services and start developing a world-class HVAC program and improve your bottom line. EffiTrack is an independent, vendor-neutral company, so you can trust that our recommendations and reports will be unbiased, thorough, and results-oriented.



ELSPEC NORTH AMERICA, INC. (ENA)

ENA, headquartered near Chicago, IL, is one of North America's premier power quality solutions providers, supplying innovative power quality and power factor correction solutions to our customers through our products, services, and people. Our state-of-the-art products can provide complete compensation in less than one network cycle, allowing our customers to achieve real-time power factor correction, substantial energy savings, support utility voltage sags, reduce voltage flicker and current spikes, filter harmonics, and solve many other power quality related issues in industrial, commercial, and utility markets alike.



EMCO FLOW SYSTEMS

EMCO Flow Systems has been providing flow solutions for over 35 years. EMCO knows that one flowmeter technology cannot handle all of your flow applications. The company provides vortex, ultrasonic, turbine, electromagnetic, and mass flowmeters for your liquid, gas, and steam flowmetering needs, and the experience to provide the right meter for the right application.



ENERGY CONTROL SYSTEMS

Energy Control Systems is a national and international provider of energy conservation and power quality solutions. For over 17 years and with clients in more than 40 states and 16 foreign countries we utilize all our resources and expertise to provide you with the right system, the right product, for the right situation for maximum results. The new millennium has presented us with additional energy concerns. Many of our sources of energy are not renewable and this presents to us, as consumers, the striking fact that energy use will cost more each year. Our motivation is to evaluate energy consumption and power systems and make recommendations through the use of zeolite desiccants and power quality products to create efficient use, while creating a pure power system to deliver the longest possible product life. Our system survey and evaluations encompass the total electrical environment in your facility. From the air conditioning and refrigeration systems to the minutest process controller on the plant floor, our team of professionals will provide the highest quality recommendation providing the maximum return on invested dollar. Talk is cheap, but results are priceless. Come visit us, it will be worth it, guaranteed.

ENERGY MARKETS/CHEM WEEK

Energy Markets magazine offers "Global Solutions for Integrated Energy Executives" with industry-leading editorial, a worldwide subscriber base, audited circulation, and monthly access to your customers and prospects.



ENERGYPROMOTION.NET

EnergyPromotion.net is your "No. 1 Choice for Energy Reports."



ENERGY USER NEWS

Energy User News is edited for professional energy managers, facility managers, and building owners. Coverage includes all areas of facility management related to energy-intensive building systems and power acquisition.



ENGINEERED SYSTEMS (ES)

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

ENLINK GEOENERGY

Where innovative design, quality construction, and a total commitment to excellence combine to produce a new means of commercial indoor heating and cooling so different from, and so superior to, conventional HVAC systems that it is changing the nature of indoor comfort systems...forever. We start with a time-proven concept, geothermal energy, based on the premise that temperature beneath the earth is constant and transferable, and by applying new technology and a "total package approach," we're rendering conventional, wasteful methods of indoor heating and cooling obsolete.



E ON LIGHT USA

Trebor Power Systems, Inc. is a leader in the power quality field with a quarter century of combined experience. Our in-house engineers and field service electricians and technicians provide the most comprehensive solutions for today's grounding, transient, and harmonic problems. Priding ourselves as master distributors for Total Protection Solutions by Joslyn™, Powersmiths International, and Lightning Preventor, we are confident in providing you with quality products, services, and value. We are centrally located in the "Lightning Capital" Orlando, FL. Our ability to provide cost-effective solutions to government, institutions, school districts, industrial, and commercial properties have withstood the test of time. From single suppressor installations to major OEM design and implementations, we stand ready to serve you. Increasing bottom line profits through reduction of downtime and equipment loss is the impetus of TPS.

EVEREST COATINGS, INC.

Everest Coatings, Inc. (ECI), a private corporation since 1984, is a technological and manufacturing leader in the coating and waterproofing industry. ECI has provided materials for millions of square feet of successful roofing and wall applications. Everest's continuing success can be attributed to its commitment to provide high performance, low VOC products that are user-friendly. ECI manufactures the highest quality acrylic elastomeric coatings (including a patented high-strength acrylic coating), silicone coatings, polurea, and sealants, as well as a range of primers for almost every substrate.



FHP MANUFACTURING

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

1ST SOURCE LIGHTING

One of the oldest and most experienced fluorescent high-bay lighting manufacturers in the U.S., 1st Source Lighting is consistently refining its product line to exceed performance and maintenance expectations for energy-efficient light sources.

FLEXIM INSTRUMENTS

FLEXIM manufactures ultrasonic flowmeters for liquids and gases. Clamp-on and wetted models are offered. There are portable as well as fixed-installation versions. Model 7407 computes BTU's and is used in power and facilities management applications. Model 7807 measures the flow in up to four pipelines. All models feature high-speed signal sampling utilizing dual microprocessor technology.



FLIR SYSTEMS

FLIR Systems, the global leader in infrared cameras, will exhibit its new smart ThermoVision® A-series infrared cameras, which add an entirely new functionality to off-the-shelf infrared systems—the ability to initiate alarms and even to automatically prompt corrective, preemptive action based on thermal information.



FLOW CONTROL INDUSTRIES, INC. (FCI)

Flow Control Industries is the world's leading designer and manufacturer of pressure independent modulating flow control valves used in the chemical, petroleum, HVAC, and other industries. FCI's valves dramatically reduce the performance issues, capital expenses, and operating costs associated with unavoidable system pressure fluctuations and the demand for variable flow. FCI's leadership and management are confident that FCI's unique valve technology will continue to revolutionize system design and operation, minimize performance risk, and deliver outstanding economic advantages for its customers. In business since 1988, FCI is privately financed, profitable, and growing.



FRONTIER ASSOCIATES LLC

Frontier Associates provides consulting assistance to electric and gas utilities, large industrial energy consumers, and commercial energy consumers in these areas: energy efficiency program design and evaluation; energy efficiency retrofit services; electricity pricing, procurement, and rate negotiations; identification of opportunities to reduce energy costs; utility resource planning, sales, and marketing support; market research; regulatory compliance, and energy policy development. Frontier was created in 1999 as a "spin-off" from Planergy, Inc., a nationally known consulting and energy service company.

GARLAND COMPANY, INC.

Garland Floor Company is a nationally recognized leader in solving America's industrial and commercial floor problems. Since 1959, we have manufactured and installed over 100 million sq. ft. of flooring. With over 75 products, we can provide the solutions you need to solve any floor problem. The majority of Garland customers are repeat customers who trust Garland to provide high-quality materials. All Garland products are backed by a warranty assuring full satisfaction. The Garland family of products includes epoxies, polyurethanes, novalacs, and vinyl esters. Garland has provided solutions for chemical processing, food and beverage, pharmaceutical, electronics, textile, paper, printing, metalworking, and transportation industries.



GEICO DIRECT

The name goes back to GEICO's first customers in 1936 who were government employees and military personnel. Founder Leo Goodwin went into business determined that he could deliver automobile insurance at reduced prices by selecting prime customer groups and marketing directly to them. He succeeded in driving down operating costs and passed the savings on to policyholders as discounts. GEICO continues to find ways to manage its business costs in order to offer savings to customers today.

GENERAL CONSULTING, INC.

The company designs and implements projects for electrical savings on lighting, air conditioning, and motored equipment. ROI is maximized with short payback periods of only 16 to 28 months and it is risk-free. Savings guarantee is backed with an insurance policy underwritten by Great American Insurance Group. Projects are developed for high durability, typically providing full financial benefits for over 20 years.

GEO-MARINE, INC.

Geo-Marine, Inc. (GMI) has more than 30 years of experience in delivering innovative, cost-effective engineering and environmental services to its clients. A certified SBA small business (under NAICS codes 541710 and 562910), GMI has successfully completed more than 3,000 projects ranging in value from a few thousand dollars to more than \$32 million in locations covering the entire continental U.S., Canada, Mexico, the Caribbean, South America, and Asia. GMI offers its clients cost-effective and timely solutions, as well as extensive federal, state, municipal and commercial experience.



GEO THERMAL HEAT PUMP CONSORTIUM (GHPC)

The Geothermal Heat Pump Consortium, a nonprofit organization, promotes the use of geoweb heating and cooling technology. GHPC is a resource for anyone wishing to know more about geoweb and can provide technical expertise, marketing research data and insight, and current industry activity status.



GLOBAL ENERGY GROUP, INC.

Global Energy Group manufactures patented products that will increase the efficiency of new or existing air-cooled equipment (packaged DX units, split systems, air-cooled chillers) by 20-40%, resulting in immediate operational cost savings. These units will also increase the capacity of the equipment by 20-25% for additional cooling. We can provide equipment only or a complete turnkey installation and can even finance those systems with our unique shared savings approach—requiring no upfront capital.

GREEN MOUNTAIN ENERGY COMPANY

Green Mountain Energy Company started with a simple idea: use the power of consumer choice to change the way power is made. We would offer electricity made from sources that are less polluting than those traditionally used: sources such as wind, water, and natural gas. The company was confident that, given a choice, informed consumers would choose cleaner electricity. That was 1997. Today, thanks to consumers like you, Green Mountain Energy Company is the leading retail provider of cleaner electricity in the nation.



GREEN POWER/WEBCOM

Green Power is the new magazine for professionals involved in energy and power from solar, photovoltaic, wind, hydro, biomass, microturbine, cogeneration, hydrogen, geothermal, and other low-emission, energy-efficient systems and technology. It serves the information needs of business and technical professionals in the green power industry, as well as owners and operators of generation and distribution systems, buildings, facilities, plants, equipment, commercial and residential developments that utilize green energy and power.



GREEN@WORK

A compelling, contemporary publication dedicated to telling the stories of ecological pioneers, products, and systems that are driving an important change in corporate and bureaucratic America, green@work unifies many different public and private sector forces with a common cause: green initiatives. Its audience targets 25,000 of the most powerful decision-makers who are painting the economic landscape green. The magazine's focus is pro-business and positive; its goal is to reinforce sustainable initiatives by sharing success stories and profiling individuals who are making it happen. Green@work explores the social, ideological, economic, and political issues that advance green design strategies, as well as the intellectual and charismatic expressions of the visionaries who are fostering mainstream acceptance of ecological advocacy.

GUIDING LIGHT TECHNOLOGY

Everyplace catastrophes involve fire, explosion, collapse or short circuiting, all electrical systems, including emergency power supplies are at risk. The objective of long lasting glow in darkness photoluminescent materials is to circumvent these hazards by offering egress systems that do not use electricity, battery backup, or any power at all.



HONEYWELL UTILITY SOLUTIONS

Honeywell DMC is a national leader in the energy and water services industry, helping people and companies manage their energy and water use. Since 1977, Honeywell DMC has delivered savings, improved comfort, and offered technical assistance to more than 7.5 million customers on behalf of over 100 electric, gas, and water utilities. Honeywell DMC offers program management and implementation services and is the preferred provider for many utilities and network service providers. The company was an early pioneer in delivering energy efficiency surveys and installations to utility customers, a service that has been continually improved. Largest national vendor of automated meter retrofit implementation. Honeywell has installed over 500,000 load management points, allowing energy providers to safeguard capacity while helping protect the environment. It offers market transformation field account management services to promote the sale of energy-efficient technologies and is a leader in sophisticated energy affordability programs for lower income utility customers. It has also designed highly innovative water conservation programs that help save over 10 billion gallons of water annually.



HPS, HILLHOUSE POWER SOLUTIONS

Hillhouse Power Solutions provides energy savings, power quality, and air quality products and services to industrial, commercial, and residential customers. Its focus is to reduce your electric costs, solve power problems, and improve indoor air quality. HPS brings you a full battery of products and services designed to meet your needs. From analysis and consultation to turnkey design, installation, and long-term monitoring, HPS provides a single-source solution, customized specifically to meet your needs. Hillhouse is the knowledgeable partner you've been looking for to design smart solutions for your facility. Invest a few minutes learning about our proven approaches. Look through our website and then give one of our Certified Energy Consultants or Power Quality Consultants a call. We'll schedule a no-obligation review of your facility, then give you specific ideas about what we can accomplish for your home or business.



HUBBELL BUILDING AUTOMATION, INC.

Hubbell Building Automation, a division of Hubbell, Inc., is a leading developer of lighting control technology for lighting systems. Hubbell Building Automation leads the market in the technological innovation of HID lighting and occupancy sensor-based controls vital to the energy conservation of modern lighting systems. Hubbell develops and markets an innovative suite of lighting control solutions primarily for commercial, industrial, and institutional applications and has saved companies up to 60% on energy consumption.



INDUSTRIAL HYGIENE NEWS

Industrial Hygiene News provides information on products and services for measuring and controlling various health hazards in the work environment.

SHOWCASE

Network with exhibitors on a one-on-one basis

ILLUMINATING ENGINEERING SOCIETY TEXAS CAPITAL SECTION
The Illuminating Engineering Society brings together all disciplines in the lighting profession in a forum of education, professional development, and networking.



INTERNATIONAL GROUND SOURCE HEAT PUMP ASSOCIATION
The mission of The International Ground Source Heat Pump Consortium (IGSHPA) and its membership is to promote the use of ground source heat pump technology worldwide through education and communication.



KMC CONTROLS
For over 30 years, KMC Controls has demonstrated both of these skill sets: the vision to lead and the wisdom to thrive. KMC pioneered pneumatic control devices for heating, ventilation, and air conditioning (HVAC) applications. The company was a leading participant as analog electronic controls took hold in building system design and KMC established a complete line of fully programmable digital products, as well as the required technical expertise to fulfill the toughest challenges in today's building automation and energy management areas. But KMC is more than just a designer and manufacturer of building control products and systems. It built its past and stakes its future on delivering comfort.



LAMP ENVIRONMENTAL INDUSTRIES, INC. (LEI)
Protecting your company and safeguarding our environment is the commitment of LEI, Inc. LEI offers hazardous waste, industrial waste, abatement services, environmental services and safe, reliable transportation services. LEI, Inc. is the only ISO 14001 registered mercury recycling company proudly serving since 1994.

LENNOX INDUSTRIES

An industry leader in quality and innovation since 1895, continually striving to create indoor comfort products that make your home or office a better place, Lennox Industries is a leading provider of climate control solutions for heating, air conditioning, and refrigeration markets in over 100 countries.

LITHONIA CONTROLS

Lithonia Lighting is North America's largest manufacturer of lighting equipment for commercial, industrial, outdoor, and residential applications.



LOGIC BEACH
The Logic Beach HLP-10, Hypertagger PowerPlus data logging system records AC voltage, current, and power, and provides real-time data parameters, and allows the simultaneous recording of temperature, flow, pressure, frequency, and any other input addition from standard industrial sensors. Power data is transmitted from the Power Sensing Harness (PSH) to the data logger via an isolated serial data link providing safe operation in high voltage applications.



MACDONALD SYSTEMS, INC.
Since 1985, MacDonald Systems, Inc. has served its customers with the selection and application of state-of-the-art protection systems and equipment that provide mission-critical, 24/7 performance, and improved productivity. As manufacturer sales agents and distributors, we have developed successful channels with price protection throughout our territory.

MAGNARAY INTERNATIONAL

MAGNARAY offers energy-efficient lighting products that reduce your energy and maintenance costs. In fact, MAGNARAY is an investment—not an expense.

MCQUAY INTERNATIONAL

Leaders in quality manufacturing of a full line of HVAC products, McQuayAirConditioning has always been an innovative leader in the heat pump industry. Pioneering geothermal applications nearly 50 years ago, McQuay has continued to provide quality products for commercial, industrial, and institutional applications around the world.

MOONCELL, INC.

MoonCell, Inc., manufacturer of energy-efficient, solid-state lighting products and integrated wind and solar renewable energy products, announces development of a product that adds significantly to MoonCell's product catalog. Versa-Lum™ will have many applications including the lighting of underpasses, subway systems, parking garages, and spaces where high-quality light in terms of visual acuity and color rendition is needed but where there is a great desire or need to significantly reduce the amount of energy consumed by lighting.



NACE INTERNATIONAL—THE CORROSION SOCIETY

NACE offers education programs for both members and nonmembers in the U.S., Canada, and a variety of international locations. From one-day to intensive weeklong courses, all NACE courses are developed and taught by corrosion professionals with years of practical experience in the field.



NATIONAL ASSOCIATION OF ENERGY SERVICE COMPANIES

Known as NAESCO, the Association fosters working partnerships with generation and distribution companies and promotes the benefits of energy efficiency, including distributed resources, in a changing market. This commitment ensures that customers and ratepayers can make optimal supply and demand-side choices. NAESCO also works with vendors to assure the quality of services and products.

NEWBIO

NewBio—NBE, LLC, has developed an innovative approach for the pre-treatment of high-strength waste. The core technology is a patented anaerobic biological reactor packaged with a high level of process automation and on-line process management. The process produces biogas that can be used to generate "green" energy. The technology has been applied to wastewater, biodegradable solids, fats and oils from the potato processing, beverage, meat processing, prepared foods, salad dressing, dairy, and candy industries.



NOREN PRODUCTS, INC.
Noren manufactures air-to-air and air-to-water heat exchangers removing heat from sealed electronic enclosures, panels, and cabinets for indoor and outdoor applications. The heat exchangers are 10 times more

efficient than air conditioning with no maintenance. NEMA 12 units are stock items; NEMA 4, 4X, and stainless steel units are also available, as well as UL, CSA, and CE. Save energy using the Noren Compact Cabinet Cooler. The company also offers fast turnaround on custom applications.



ONICON Incorporated is the industry leader in providing highly accurate and cost effective flow measurement and BTU measurement solutions. Every ONICON product is manufactured and wet calibrated specifically to the customer's order in our NIST traceable flow laboratory. This attention to detail and commitment to service ensures that every flow and BTU meter will provide maximum accuracy and performance, even in difficult flow conditions.



ONSET COMPUTER CORPORATION
Onset Computer designs and manufactures small, low-cost, easy-to-use data loggers for monitoring and measuring temperature, relative humidity, light intensity, motor on/off, voltage, and amperage in a wide variety of applications throughout the HVAC and energy industries. HOV data loggers are being used for performance contracting, energy audits, M&V, baseline, and post-retrofit studies worldwide.



POLLUTION EQUIPMENT NEWS
Pollution Equipment News provides product information to the person responsible for air, water, wastewater pollution control, and hazardous waste disposal.

POLYCON SYSTEMS, INC.

Through a Cooperative Research and Development Agreement (CRDA), in conjunction with the Army Corps of Engineers developed a polymer composite micro-overlay product known as E-Krete. This product, along with the equipment that was necessarily developed for the successful application of the product, combined for application of a high-quality asphalt renovation program known as the Polymer Composite Micro-Overlay (PCMO). The PCMO is used for the repair and upgrade of existing deteriorated asphalt or concrete surfaces on airfield aprons, taxiways, secondary runways, roadways, bridge decks, and parking facilities. Polycon's products have also successfully been used as an extremely durable pavement marking material with its Permastride product line and, when used with the E-Krete micro-overlay system, can be applied as either a topical application or as an integral marking material within the matrix of the micro-overlay itself. Polycon began testing these products in 1997, and since then has placed dozens of successful applications throughout the U.S. and Canada. Polycon Systems, Inc. was purchased in January, 2003, and is currently a wholly owned subsidiary of Interstate Highway Construction, Inc. of Englewood, CO.

PORT-A-COOL

Since its beginning in 1973 as a company with one product, General Shelters has enjoyed consistent growth. Today, General Shelters manufactures many products and is recognized as an industry leader. General Shelters selected Center, TX, for the home office of several of their divisions and manufacturing locations. General Shelters products are respected in both the U.S. and international marketplaces. These products range from those used primarily in agricultural and horticultural applications, to mobile, modular, and portable buildings, cargo trailers, and many variations of evaporative-cooling products with virtually unlimited uses. With a strong network of distributors, General Shelters continues to expand into worldwide market horizons and produce outstanding sales revenues, all from the beautiful setting of Center, TX.

POWER MEASUREMENT, LTD.

Our patented ION[®] technology helps companies use, deliver, purchase, and bill for energy efficiently and economically. ION systems also help guarantee higher levels of power quality and reliability, while enabling new strategies like distributed generation that support increasing demand to energy. Our world-class production and test facilities, along with an ISO-certified quality system, ensure a wide range of the best products the market has to offer. We are pioneers in the field of energy information and control and continue to leverage the interplay between computer, communications, and energy technologies. Power Measurement pioneered the revolution from analog to digital metering by introducing the world's first microprocessor-based three-phase power and energy meter in 1984 and we've continued to define the leading edge.

POWER MONITORS INC. (PMI)

PMI manufactures full-featured Power Quality Monitors suitable for up to 600 VAC and 5000 amps (power, power factor, energy, harmonics, waveform capture, and can record data for up to one year). The new Eagle Class of Power Quality Monitor from PMI are small in size (like two ice cream sandwiches) and uses Bluetooth wireless technology for downloading data, setting parameters, and viewing real-time waveforms. Using a Bluetooth-enabled PDA, you can communicate with the Eagle monitor up to 30 feet away. Now the facilities guy can get data from a full-featured Power Quality Monitor and not have to touch the energized device or maybe not even enter the locked room or secured vault where the equipment is located. The Utilities and Co-ops know us, now we'd like to introduce our products to you.



PROFILE SYSTEMS, LLC
The Profile P1800 System offers comprehensive modular solutions for HVAC and lighting control, critical conditions monitoring, and energy submetering. Whether it's just lighting control or a complete suite of solutions, the P1800 System delivers flexible and customizable functionality that incorporates leading-edge wireless technology and a simple-to-use, robust, web-based system interface that's remotely accessible from any internet-connected device. Built-in wireless communications technology eliminates the need for dedicated phone lines and extensive communications wiring, while Profile's web-based system interface eliminates the need for costly proprietary software. Backed by a technical support staff available toll-free 24x7x365, the P1800 System represents the most compelling control, monitoring, and metering solution available.



PRIMEX WIRELESS

Completely wireless and easy to install, the GPS Wireless Clock System from Primex Wireless is guaranteed to synchronize all clocks in your facility, ideal for new construction or replacement, the system is affordable and maintenance-free. Various clock styles are available including battery-operated, electric, and digital models. Optional wireless accessories include a Tone Generator, Tone Speaker, and Computer Time Sync.



REFTEC INTERNATIONAL, INC.
RefTec has developed small-scale 75kW and 15kW cogeneration systems that service residential and commercial applications. Our AvantGarde systems burn NG or LP to generate electricity and utilize thermal waste energy to heat indoor space, pools, domestic water, etc. Hot exhaust gas from the 15kW system supplies a 5-ton absorption chiller for air conditioning.



RICHARDS-ZETA (RZ)

Richard-Zeta Building Intelligence, Inc. provides control solutions for thousands of buildings around the world. RZ has a history of delivering Intelligent Buildings—known by RZ as "Building Intelligence," solutions that meet the changing demands of building owners and facility managers. Today, RZ systems can be found running some of the best facilities in the world including major airports, class A commercial offices, large colleges/schools, process/textile plants, and hospitals. Facility owners have found RZ truly makes building management easier—and at reasonable prices. RZ has a worldwide network of dealers from North America and Europe to Asia and Australia.



RWE SCHOTT SOLAR (RSS)

If you want a clean, reliable solar power system with the best price-performance ratio in the industry, you've come to the right place. With over 30 years of experience, RWE SCHOTT Solar is a worldwide leader in the design, manufacture, installation, and support of complete solar energy systems. RSS combines clear technical leadership in solar module manufacturing with extensive engineering activities and dedicated customer service to create high-performance photovoltaic power systems for a wide variety of requirements.



SEMPTRA ENERGY SOLUTIONS

Semptra Energy Solutions, a wholly owned subsidiary of Semptra Energy, offers businesses outsourcing services that help them drive efficiencies in the ever changing energy environment. The company offers an integrated mix of services, such as facility management, supply and price risk management, energy efficiency, energy asset management, and infrastructure ownership.



SENSOR SWITCH, INC.

Sensor Switch, Inc. is a leading U.S. manufacturer of lighting controls. The company's broad breadth of products includes a decorative-style, two-pole wall switch that is ideal for inboard/outboard control of lights and fan control. Other products include infrared and microphone low voltage and line voltage devices.



SLIM JIM® GEO LAKE PLATE

Slim Jim® Geo Lake Plate—"Pond Loop in a Package"—the alternative to the plastic loop. From single to multiple plate assemblies, the Slim Jim® is compact, simple and easy to install and labor friendly. Available in stainless steel or titanium for seawater applications, the Slim Jim® Geo Lake Plate is the lake loop of choice for geoechange (fluid-to-fluid heat transfer in water-cooled equipment).



SMART SYSTEMS INTERNATIONAL

SmartSystems HVAC/PTAC controls, thermostats, sensors, and software offer sophisticated energy management for the lodging industry, government, and others seeking energy savings, easy installation, and maximum comfort.

SOLAR INTEGRATED TECHNOLOGIES

Solar Integrated Technologies designs, manufactures, and installs proprietary photovoltaic systems for commercial, industrial, and mobile applications worldwide. The Los Angeles-based company has combined 75 years as a leading provider of energy-efficient roofing systems with world-class solar technology to offer commercial roofing solutions and mobile power systems that produce reliable and affordable "green" power.

Solar Turbines

A Caterpillar Company

SOLAR TURBINES INCORPORATED

Solar offers a complete solution from engineering specification to asset management—for your 1-50 MW power needs. We can help with your cogeneration, baseload electricity, dispersed power, combined-cycle, peak shaving, district heating-cooling, and standby power needs for a wide variety of facilities, including industrial/processing facilities, buildings and institutions, and distributed power plants.



SOUTHERN ENERGY TECHNOLOGIES, INC.

Southern Energy Technologies, Inc. is a full-service lighting efficiency systems and services company. Southern Energy has specialized since 1989 in the design, implementation, and maintenance of comprehensive energy-efficient lighting upgrade solutions for commercial, institutional, educational, medical, and retail facilities throughout the Southeastern U.S. Southern Energy Tech is an EPA-Certified ENERGY STAR Buildings Ally, a "Green Lights" Lighting Management Company, and Certified Energy Efficient Lighting Services Company. Its mission is to implement lighting upgrade solutions designed to achieve desired results, bringing together resources necessary in materials, labor, and managerial skills required for successful project implementation.



STATE ENERGY CONSERVATION OFFICE (SECO)

The State Energy Conservation Office of the Texas Comptroller of Public Accounts administers and delivers a variety of energy efficiency and renewable programs which significantly impact energy cost and consumption in the institutional, industrial, transportation commercial and residential sectors. The mission of SECO is to promote and provide for the efficient use of energy, while protecting human health and safety and the environment. Beneficiaries of SECO's services include state agencies, public schools, city and county governments, institutions of higher education, private industries, and residential and commercial consumers. SECO's task is to enable Texas to enjoy the optimal benefit from the domestic energy we produce, to contribute to our state's growing economy through reducing a major operational cost of state government, school districts, municipal governments, hospitals, and small businesses.

SHOWCASE

Find cost-saving solutions for your organization



SYNERGY
Synergy is a leading building systems integrator and energy solutions provider. Synergy is dedicated to being a valuable business partner to facility owners who embrace innovative technologies. We focus on building long-term relationships and strive to share your values, support your mission, share your risk, and deliver results that ensure your business prospers. Our team of professionals brings unique capabilities in HVAC, building automation systems, and facility management. Recent alliances with Texas Energy Products and Software House have allowed Synergy to offer superior lighting solutions and integrated security systems. Synergy also offers project financing and guaranteed savings for organizations looking to make facility improvements without a capital investment. Typically, projects realize an internal rate of return ranging from 25% to 50%, which means immediate positive cash flow for many of our customers. For more information about how Synergy can convert your wasted expense into net operating income, visit www.synergysolutions.com.



STRATEGIC ENERGY
Strategic Energy is a national competitive electricity supplier. For a management fee, Strategic buys wholesale power under long-term contracts for direct delivery to retail customers under contract. The company operates in 10 states with retail choice: California, Connecticut, Maryland, Massachusetts, Michigan, New Jersey, New York, Ohio, Pennsylvania, and Texas.

TAS PACKAGED SERVICES

We are working hard each day to build a business that we all can be proud of, one that is differentiated by the talent and integrity of our people. We will utilize our expertise to develop products, services, and creative offerings that bring real value to our customers. We will remain focused on the life-cycle benefits our customers achieve through our products and services, not simply focus on "first cost." Because people make technology come to life, we will focus on locating, motivating, and retaining the best talent in the world. Collectively, we commit ourselves to our mission as stated: Our mission is to be the leading provider of packaged modular energy solutions for the power, process, and HVAC industries. We will accomplish this by living our core values and dedicating ourselves to providing long-term value to our customers.



TECO-WESTINGHOUSE MOTOR COMPANY
TECO-Westinghouse Motor Company is a leading manufacturer of electric motors, with a full line of induction, synchronous, and DC motors available from 1/4 HP to 100,000 HP. We also supply motor controls and provide engineering services, genuine Westinghouse renewal parts, and large motor repairs.



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ)
The Texas Commission on Environmental Quality is the environmental agency for the state, with approximately 3,000 employees, 16 regional offices, and a \$442.2 million annual appropriation budget for the 2004 fiscal year. Some 83% of the budget is funded by program fees of \$367.4 million. Federal funds provide \$42.5 million, state general revenue provides \$27.9 million, and other sources provide the remaining \$4.5 million.

TEXAS GENERAL LAND OFFICE/ STATE ENERGY MARKETING PROGRAM

The State Energy Marketing Program sells oil and gas produced from selected mineral leases on state lands and also converts it to electric power for sale to public customers like state agencies and school districts. In addition, the program evaluates the sustainable energy development of state lands and organizes an annual U.S.-Mexico Border Energy Forum.



TEXAS RENEWABLE ENERGY INDUSTRIES ASSOCIATION
We are over 100 member companies and organizations providing products, services, and information in the areas of solar electricity and hot water, small and large wind generation, biomass electric and liquid renewable fuels, geothermal heating and cooling, and sustainable design and construction.



TEXAS SOLAR ENERGY SOCIETY
The Texas Solar Energy Society is dedicated to educating the public about the use of solar and other renewable energy technologies. Our membership includes educators, engineers, researchers, students, bankers, electrical contractors, architects, builders, building inspectors, home owners, and solar enthusiasts.

THIELSCH ENGINEERING

Thielsch Engineering is a rapidly growing, privately held company, comprised of nearly 300 people, providing a broad range of engineering, laboratory, and fabrication/repair services. Thielsch corporate headquarters is located in Cranston, RI, with branch operations in FL, ME, OH, TX, and WI.



THINKAGE LTD.
Founded in 1991, Thinkage Ltd. has a proven track record for developing powerful, easy-to-use software. Located near the University of Waterloo and Wilfred Laurier University, Thinkage has access to a talented pool of university graduates, many of whom are fluent in a second language. The company sells and supports customers around the world making use of the latest in communications technologies. MainBoss Maintenance Software is the flagship of Thinkage's CMMS division. MainBoss enables maintenance professionals to plan maintenance functions, improve productivity, lower overall maintenance costs,

and record and store valuable information about maintenance operations. The software also offers MainBoss @ Requests, an economical way to expand the functionality and productivity of MainBoss CMMS from anywhere on the planet. With the optional MainBoss @ Requests add-on, users can submit work requests via the Internet, using any email software.



TRACTEBEL ENERGY SERVICES
Tractebel Energy Services successfully manages the power needs for hundreds of commercial and industrial customers. We offer innovative energy solutions and attentive service across the U.S. See how we can reduce your energy spending.



TRANE COMPANY
Trane provides indoor comfort systems and comprehensive facility solutions for residential, commercial, and industrial building needs. Browse our site to learn more about Trane, its history, achievements, and contacts to help you meet your comfort needs. For decades, customers large and small, global and local have relied on Trane for exceptional quality products, high performing systems, reliable service, and unparalleled expertise.



U.S. DOE/FEDERAL ENERGY MANAGEMENT PROGRAM (FEMP)
FEMP's three primary areas of concern are project financing, technical assistance and planning, reporting, and evaluation. FEMP leads federal energy efficiency efforts and helps federal energy managers identify and procure products and implement projects. FEMP's mission is to reduce the cost of federal government by advancing energy efficiency and water conservation, promoting use of distributed and renewable energy, and improving utility management decisions at federal sites.



U.S. DOE/OFFICE OF ENERGY EFFICIENCY & RENEWABLE ENERGY (EERE)
The mission of EERE is to strengthen America's energy security, environmental quality, and economic vitality through public-private partnerships that enhance energy efficiency and productivity by bringing clean, reliable, and affordable energy technologies to the marketplace.



U.S. DOE/REBUILD AMERICA
Rebuild America is a network of hundreds of community-based partnerships across the nation who are saving energy, improving building performance, easing air pollution, and enhancing the quality of life. Rebuild America is working in your state and community to connect people, resources, ideas, and practices for energy solutions to community needs.



U.S. ENERGY ASSOCIATION (USEA)
USEA is an association of public and private energy-related organizations, corporations, and government agencies. USEA represents the broad interests of the U.S. energy sector by increasing the understanding of energy issues, both domestically and internationally.



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

U.S. EPA/INDOOR ENVIRONMENTS DIVISION

EPA's Indoor Environments Division offers many indoor air quality (IAQ) products. At this expo, the IAQ Building Education and Assessment Model (I-BEAM), the new IAQ Green Building Guidance, and a new training program that offers methods for improving IAQ through energy efficiency strategies will be highlighted. EPA offers many additional free information resources for download at www.epa.gov/iaq/pubs/index.html or from the IAQ Information Clearinghouse at (800) 438-4318 or iaqinfo@aol.com.



U.S. GREEN BUILDING COUNCIL NORTH TEXAS CHAPTER
U.S. Green Building Council North Texas Chapter's mission is to establish and maintain a regional coalition representative of all building industry disciplines that serve to advance and promote environmentally responsible planning, design, construction, and operation of our region's built environment.



UNITED PARCEL SERVICE (UPS)
UPS is the world's largest package delivery company and a global leader in supply chain services, offering an extensive range of options for synchronizing the movement of goods, information, and funds. Headquartered in Atlanta, GA, UPS serves more than 200 countries and territories worldwide and operates the largest franchise shipping chain, The UPS Store. Inquire today to receive special savings through your AEE membership on air and worldwide express services. You can enroll in this program by coming by the UPS booth and referring to bid #CP50001700.



UNITED STATES COMBINED HEAT & POWER ASSOCIATION (USCHPA)
USCHPA brings together diverse market interests to promote the growth of clean, efficient CHP in the U.S. It is a private, nonprofit association formed in 1999 to promote the merits of CHP and achieve public policy support. The USCHPA documents the benefits of CHP to the public and decision-makers, creating a new industry focused on CHP. USCHPA sponsors conferences and workshops and prepares reports and releases to educate the public about CHP. We create opportunities for our members to network with each other and key government officials. USCHPA participates in federal agency programs to promote CHP and clean distributed energy. In particular, we are committed to the CHP Program of the U.S. Department of Energy and the CHP Partnership Program of the U.S. Environmental Protection Agency.

USA TECHNOLOGIES
USA Technologies (OTC BB: USTT) distributes the Miser family of energy management products. These products, including the Vending-Miser® and Cooler-Miser®, greatly reduce the energy consumed and greenhouses gases emitted by vending machines, glass-front coolers, and other machines. USA Technologies is a business partner of Rebuild America.

UTC POWER
UTC Power is a proven, single-source provider of clean power solutions. As one of the newest members of the United Technologies Corp. (NYSE: UTX) family, UTC Power is able to draw on the expertise of some of the more established divisions, including the industry leaders in fuel cell technology and building heating, cooling, and control systems. Only UTC Power can bring them together with the right people and the real experience to make it all work—and work well. We look forward to helping you transform your power into a reliable source of savings.



VERDIEM
IT equipment represents the largest component of plug load energy use in the commercial sector, as well as the fastest-growing demand source. Billions of kilowatt-hours of energy are wasted every year because this demand is largely unmanaged. Verdijem develops and markets the Surveyor Network Energy Manager, a software tool that measures, manages, and reduces energy consumption in large PC networks. Quick to implement and with a typical payback of one year or less, Surveyor is in use in schools, colleges, government offices, and commercial concerns throughout North America.

W.T. LIGHTING COMPANY, INC.
Our business philosophy is to keep overhead low and quality high. By doing this, W.T. Lighting has many satisfied customers. W.T. Lighting is committed to providing quality service to all of our customers. The commitment starts with our president and is carried throughout our company down to the most important employee, the one that brings service to your door: our lighting technician. There are only a handful of companies that say they can do what W.T. Lighting does, but the fact is there is only one company proficiently time after time, and that company is W.T. Lighting Company. By comparing our quality work and low prices, you will find out that W.T. Lighting is No. 1.



WATT STOPPER
The Watt Stopper, Inc. is the leading manufacturer of a complete range of lighting control solutions. These include indoor and outdoor occupancy sensors, remote lighting controls, bi-level HID controllers, light level controls, lighting control panels, energy-efficient plug load controls, and DALI controls. ezDALI, the Watt Stopper's digital dimming and scene controls, use the DALI protocol to provide full-featured, individual ballast-level dimming. Push-button programming streamlines and simplifies installation, commissioning, and operation.

WESTINGHOUSE LIGHTING CORPORATION
Westinghouse Lighting is a leading manufacturer and marketer of more than 5,000 lighting products, including light bulbs, lighting fixtures, ceiling fans, and decorative electrical products for consumer and commercial applications.

WIDE-LITE
Products offered by Wide-Lite include architectural outdoor, commercial and industrial indoor, compact fluorescent, controls and ballast information, floodlighting, linear fluorescent, modular wiring options and accessories, QL induction, and technical information.



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

WORLD ENERGY SOLUTIONS
World Energy Solutions is focused on providing energy procurement and value-added energy services to commercial, industrial, and government customers. World Energy helps energy users find the supplier, energy, and services they need, allows energy suppliers to reach new customers and expand into new markets, and provides energy industry participants the tools and information necessary to make informed buying and selling decisions.

XEROX CORPORATION/AIR ADVANTAGE
Xerox Corporation (NYSE: XRX) is a \$15.7 billion technology and services enterprise that helps businesses deploy smart document management strategies and find better ways to work. Its intent is to constantly lead with innovative technologies, products, and solutions that customers can depend upon to improve business results. Xerox provides the document industry's broadest portfolio of offerings. Digital systems include color and black-and-white printing and publishing systems, digital presses and "book factories," multifunction devices, laser and solid ink network printers, copiers, and fax machines. Xerox's services expertise is unmatched and includes helping businesses develop online document archives, analyzing how employees can most efficiently share documents and knowledge in the office, operating in-house print shops, or mailrooms, and building web-based processes for personalizing direct mail, invoices, brochures, and more. Xerox also offers associated software, support, and supplies such as toner, paper, and ink.

Also exhibiting at this year's WEEC:
AIRCOPEN
ENERCON ENGINEERING
HVACR NEWS
TRINITY THERMAL SYSTEMS/ICEBANC
ENPRO DISTRIBUTING
GMAC COMMERCIAL MORTGAGE CO.

TOURS

Health center fuel cell project and Spouse's Tour

Tour of Austin's RBJ Health Center fuel cell power plant

Friday, September 24, 2004 / 1:30 - 3:30 pm



In the spring of 2001, Austin Energy decided to pursue a fuel cell demonstration project to determine the issues involved with either a customer or the utility owning, installing, operating, and maintaining this technology. The project would also provide a fuel cell education site for the general public. After securing grant financing, the fuel cell power plant was installed at RBJ

Health Center in Austin. The plant is a 200-kW phosphoric acid fuel cell manufactured by United Technologies Corporation; UTC Model PC25C was chosen because it was found to be the only commercially available fuel cell that met all requirements of the DOD grant. The PC25C consists of two modules. The power module converts natural gas fuel into alternative-current electric power. A separate cooling module rejects excess heat generated by the power module.

The fuel cell stack generates direct-current electric power that is sent through a power conditioner contained in the power module and converted to 480 volt, 3-phase alternating-current electric power. The RBJ fuel cell is expected to generate over 1,500,000 kWh per year into the Austin Energy electric grid.

Additional equipment to support the fuel cell power plant includes electrical connections to the electric power grid (including safety devices), piping and control system to the building for combined heat and power, nitrogen supply and connection, connection to the natural gas distribution main, and electrical and piping connections between the cooling module and the power module.

Participants taking this tour should meet in front of the registration area at 1:15 pm.

Spouse's Tour of Austin

Wednesday, Sept. 22, 2004 / 1:00 - 4:00 pm



Experience the charm of Congress Avenue and Sixth Street with their historic buildings. Tour the dynamic State Capitol, gain insight into the workings of Texas government, and view the Governor's Mansion. Journey the streets along Waller Creek, and see Waterloo Park, Custer's Headquarters, and Symphony Square. See the campus of the University of Texas and tour the LBJ Presidential Library with its political archives and gifts of state. Finally, take a driving tour of the elegant homes in the Woodlawn area.

To sign up for the tour, use the appropriate section on the registration form. Cost is \$35 per person. Participants will meet in front of the registration area at 12:45 pm.

REGISTRATION

World Energy Engineering Congress 2004

WORLD ENERGY ENGINEERING CONGRESS 2004 WILL BE HELD AT:
Austin Convention Center, 500 East Cesar Chavez Street, Austin, TX

HOTEL RESERVATIONS
Room blocks have been reserved for Conference attendees at these two hotels. **Mention that you are with AEE/WEEC to receive the special group room rates.**
Crowne Plaza Austin, 500 N H 35 - \$129 single/\$139 double per night. Hotel must receive reservations by **Aug. 30, 2004**. For reservations call (800) 684-7241.
Hilton Austin, 500 East 4th Street - \$150 single/double per night. Hotel must receive reservations by **Aug. 29, 2004**. To make reservations call (800) 236-1592.

PRE-REGISTRATION
1. BY MAIL (All Events): Complete the registration form below and return it with check or credit card number, expiration date, and signature to the address indicated. Be sure to indicate all portions of the program you wish to attend.
2. BY PHONE (All Events): For credit card payments only, you may register by phoning by calling:
Conference: (770) 447-5083, Ext. 224 or 218
Seminars: (770) 925-9633
3. BY FAX (All Events): If you plan to pay by credit card, you may complete the registration form below, including all necessary credit card information, and transmit a completed registration form to the following FAX number:
(770) 447-4354
Federal government agency participants registering by FAX must submit a

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

4. ONLINE (Conference and Expo only): For credit card payments only, you may register online at:
www.energycongress.com
Please note discount coupons in comments box and discount will be applied before your credit card is charged.

Your completed registration form, along with full payment, should be received **no later than September 15, 2004 (to receive early registration discount)**. After that date, plan to register onsite at the Austin Convention Center. For questions regarding registration, call:
(770) 447-5083, Extension 224 or 218

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

REGISTRATION CANCELLATION POLICY
Adjusted refund of conference fee (less \$125 service charge) will be made if AEE Registrar is notified in writing on or before **September 15, 2004**. No refunds after **September 15, 2004**. Substitutions may be made, but must be received in writing.

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

GROUP DISCOUNTS
(Applies to pre-registration only. May not be combined with any other discount offer.) Registration will be processed at discounted rates ONLY if full payment accompanies the registration form at the left. Submit separate registration form for each delegate and mail together (use photocopies). Payment and names of all delegates must be received in AEE office by **September 15, 2004**.

TEAM DISCOUNT: SAVE \$100 PER DELEGATE
For two or more persons registering at the same time from the same company for the full 2-day conference, a \$100 discount may be deducted from registration fee. **Discount applies only if names and fees are received by September 15, 2004**. Separate registration must be completed for each person, and all registration forms must be mailed together along with full payment. (Does not apply to Company Plan or Seminar/Conference Package rates.)

COMPANY PLAN AND UTILITY-SPONSORED CUSTOMER DISCOUNT PLAN
Companies and utilities may register up to 10 delegates for the 3-day conference and 2-day expo for a flat fee of \$3800 for AEE corporate member firms and \$4000 for non-member firms. Submit registration form provided and attach complete list of delegate names. **Final delegate list and full payment must be received no later than September 15, 2004**.

WEEC 2004 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 SEPTEMBER 15, 2004. 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, completed form to: (770) 447-4354

1 Delegate Information *No one under 16 years of age admitted.*

Name: Mr. Ms. _____ LAST FIRST MI

Title _____

Name for Badge _____

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

Company _____

Address _____

City/State/Zip _____

Phone (_____) _____ FAX (_____) _____

E-Mail Address _____

Please complete as part of registration:

1. TYPE OF FIRM/BUSINESS (Check only one):
 Commercial Institutional Government Consulting Engineer
 Industrial Construction/Architect Utility/Energy Producer Manufacturer/Vendor

2. OCCUPATION/TITLE (Check only one):
 Manager V.P., President, CEO Owner/Developer Plant Eng./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 September 15, 2004. (This saves you the \$40.00 admission at the door.) **Please send "Attn: Dept. ED" or fax to (770) 447-4354.**

3 Special Events

Systemwide Cooling Efficiency Seminar—September 21, 2004 / 1:00-4:00 pm / Fee: FREE

Smart Energy Industry Energy Roundtable—September 21, 2004 / 1:00-4:00 pm / Fee: \$95

4 Tours (Optional)

Active Power Factory Tour—September 22, 2004 / 11:30 am-2:30 pm / Fee: FREE

Lithonia Lighting Tour—September 22, 2004 / 4:00-5:00 pm / Fee: FREE

DOE CIP Development Project Tour—September 23, 2004 / 12:00 noon-2:00 pm / Fee: FREE

The Palmer Center Garage PV System Tour—September 23, 2004 / 4:30-5:30 pm / Fee: FREE

Austin's RBJ Health Center Fuel Cell Tour—September 24, 2004 / 1:30-3:30 pm / Fee: FREE

Spouse's Tour of Austin—September 22, 2004 / 1:00-4:00 pm / Fee: \$35 per person

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 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 _____ No. _____ 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 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 further agree to promote the purposes of the Association as far as shall be in my power.

APPLICANT'S SIGNATURE _____ (DATE) _____

Please choose one of the following AEE Membership categories:

AEE Membership Only—Dues \$160

AEE Membership plus Facility Managers Institute—Dues \$180

AEE Membership plus Cogeneration & Distributed Generation Institute—Dues \$180

AEE Membership plus Environmental Engineers & Managers Institute—Dues \$180

AEE Membership plus Energy Services Marketing Society—Dues \$180

AEE Membership plus Security Managers Institute—Dues \$180

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

Program Options

5 Conference / Sept. 22-24, 2004 *Please fill in appropriate fee*

Conference registration entitles you to attend any of the ten conference tracks. Fee includes lunches September 22-23, keynote brunch September 24, copy of proceedings, exhibit pass, and banquet (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 Sept. 22 or Sept. 23 or Sept. 24—\$400

GROUP DISCOUNTS (Applies to pre-registration only):
COMPANY PLAN (up to 10 delegates): AEE SUSTAINING MEMBER FIRM—\$3800
 NONMEMBER FIRM—\$4000
 Each additional delegate—\$400

OR
TEAM DISCOUNT (save \$100 per delegate): Subtract \$100 for each registrant. (Does not apply to Company Plan rates)

Seminars—Separate Fees / Sept. 21-23, 2004

THREE-DAY SEMINARS: September 21-23, 2004
 Fundamentals of Buying and Selling Energy* / 9:00 am - 5:00 pm
 Fundamentals of Power Quality* / 9:00 am - 5:00 pm
 AEE MEMBER/GOVERNMENT/NONPROFIT FEE—\$1050
 REGULAR FEE—\$1150

TWO-DAY SEMINARS: September 21-22, 2004
 Skills Update 2005: An Advanced Program for CEMs / 9:00 am - 5:00 pm
 AEE MEMBER/GOVERNMENT/NONPROFIT FEE—\$950
 REGULAR FEE—\$1050

TWO-DAY SEMINARS: September 22-23, 2004
 Energy Auditing 101 / 9:00 am - 5:00 pm
 Optimizing HVAC Performance / 9:00 am - 5:00 pm
 AEE MEMBER/GOVERNMENT/NONPROFIT FEE—\$950
 REGULAR FEE—\$1050

ONE-DAY SEMINARS: September 21, 2004

Sustainable Lighting Systems / 9:00 am - 5:00 pm
 Creating a Strategic Energy Plan / 9:00 am - 5:00 pm
 Continuous Commissioning* / 8:00 am - 5:00 pm
 Boiler and Steam System Optimization / 9:00 am - 5:00 pm
 Using Excel and Interval Meter Data to Understand Loads and Cut Energy Costs / 9:00 am - 5:00 pm

Fee—\$480

Banquet—Guest Fee / September 22, 2004

Please indicate if you plan to attend the banquet. Yes No (Ticket included in full-conference registration fee). Additional banquet ticket required for spouse or guest.
 Prepayment required; payment serves as reservation. Fee—\$50

Name for Reservation _____

Brunch—Guest Fee / September 24, 2004

Please indicate if you plan to attend the keynote brunch. Yes No (Ticket included in full-conference registration fee). Additional brunch ticket required for spouse or guest.
 Prepayment required; payment serves as reservation. Fee—\$30

Name for Reservation _____

6 Payment Information

Select method of payment:

CHECK ENCLOSED (Payable in U.S. funds to Association of Energy Engineers)

CHARGE TO MY CREDIT CARD (for advance registrations only)

American Express VISA MasterCard

CARD NO. _____

Expiration Date _____ Signature _____

TOTAL CONFERENCE, SEMINAR, & TOUR 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.

AEE 2269—FINAL A B C D E F G H I J K

NEW FOR 2004!
Win a \$100 certificate for AEE Books



Register for a room in one of the hotels with an AEE block (see details under "Hotel Reservations" above) and your name automatically will be entered in a drawing for a \$100 certificate valid until December 31, 2004, at AEE Books. Prize winner will be notified by October 15.

Hilton Austin (800) 236-1592
 Special price of \$150 valid until August 29

Crowne Plaza Austin (800) 684-7241
 Special prices of \$129 & \$139 valid until August 30

