Dear AEE SoCal Annual Conference Attendee:

Welcome to our 2014 Annual Conference!

Each year, the AEE SoCal Annual Conference focuses on a specific theme that addresses emerging issues that can impact the efficient, reliable and environmentally responsible generation, delivery and use of energy within Southern California.

This year, our Annual Conference will focus the relationship between energy utilities and their commercial, industrial and institutional customers, which is experiencing a transformational shift.

Utilities now interact with their customers in complex and diverse ways that have evolved beyond the traditional role of reliably delivering energy as a commodity at a set metered rate to an end user.

The AEE SoCal 2014 Annual Conference will examine the current role of energy utilities in their relationships with their Southern California commercial, industrial and institutional customers and how that role is continuing to change and evolve.

What will energy utilities look like and how will they act in the future?

Thank you for setting aside your day to attend this informative and thought-provoking event. Please be sure to thank our Annual Conference Sponsors, Exhibitors and AEE SoCal Chapter volunteers who are the key to making this Conference a success.

Sincerely,

Alan Ring, AEE SoCal Annual Conference Chairman
Richard Hack, AEE SoCal President
Southern California Gas

-Platinum Sponsor-

Southern California Gas has been delivering clean, safe and reliable natural gas to its customers for more than 140 years. It is the nation’s largest natural gas distribution utility, serving a population of 20.1 million consumers through 5.6 million gas meters in more than 500 communities. The company’s service territory encompasses approximately 20,000 square miles of diverse terrain throughout Central and Southern California, from Visalia to the Mexican border.

Headquartered in Los Angeles, we are a subsidiary of Sempra Energy (NYSE: SRE), a Fortune 500 company based in San Diego.

The Energy Resource Center is your energy efficiency partner. The building is an award winning energy-efficient, environmentally friendly technologies. The facility hosts an array of practical seminars, demonstrations and consulting services; the staff represents SoCal Gas and can help businesses find the most cost-effective and energy-efficient solutions to their energy needs.
7:30 a.m.—1 p.m.
Registration Open / Badge pick-up

7:30 a.m. — 8:30 a.m.
Continental Breakfast

8:30 a.m. — 8:45 a.m.
Venue Safety Briefing
Opening Remarks
Exhibitors & Sponsors Recognition

Rodney Davis, SoCalGas Energy Resource Center (ERC) Operations Supervisor
Rich Hack, AEE SoCal Chapter President
Alan Ring, AEE SoCal Annual Conference Chairman

8:45 a.m. — 9:00 a.m.
SoCalGas Customer Programs Update

Dan Rendler, Director / Customer Programs & Assistance
Southern California Gas Company, a Sempra Utility
9:00 a.m. — 9:30 a.m.
Technology Visionary Presentation

Dr. Scott Samuelsen
Professor Emeritus, Mechanical and Aerospace Engineering
Director, Advanced Power and Energy Program (APEP)
University of California, Irvine

9:30 a.m. — 10:00 a.m.
Keynote Address

Dukku Lee, P.E.
General Manager
Anaheim Public Utilities
“Customer Engagement at Anaheim Public Utilities”
10:00 a.m. — 10:15 a.m.
Conference Break

10:00 a.m. — 3:30 p.m.
Tabletop Exhibits open

10:15 a.m. — 10:45 a.m.
Ricson Chude, P.E.
DSM Engineering / Project Engineering & Special Projects
Southern California Edison

10:45 a.m. — 11:15 a.m.
Bret Adams
Director of Business Development
EnerVault
**The Opportunity for Utility Scale Long Duration Energy Storage: The Turlock Project**

11:15 a.m. — 11:45 a.m.
Richard T. Sperberg
CEO
OnSite Energy
**Industrial Energy Efficiency – A Partnership between Utilities, Customers and Third Party Providers**

11:45 a.m. — 12:15 p.m.
Dan Cohee
Vice President
PDE Total Energy Solutions
**Growing an Internet of Energy: A Utility Business Solution for an Interactive Grid through Microgrid & Energy Storage Analysis, Design, and Operation**

Dr. Ryan Wartena
CEO & Founder
Growing Energy Labs, Inc. (GELI)
12:15 p.m. — 1:30 p.m.  
Lunch / Networking / Exhibits

1:30 p.m.—2 p.m.  
Christopher Lohmann  
Vice President, Alternative Energy Solutions  
Energi, Inc.  
*Risk Mitigation for New Energy Initiatives Financing*

2 p.m.—2:30 p.m.  
Karen Bertram  
Executive Manager  
GridRx  
William Garnett, III  
Managing Director  
Janas Associates / CARE Funding  
*Smart Grid Evolution: Analytical and Financial Tactics*

2:30 p.m.—3:30 p.m.  
Breakout Sessions  
Various conference speakers will be available at various locations within the Energy Resource Center to lead breakout discussions and share their expertise and insight.

**CONFERENCE AGENDA, SPEAKERS AND PROGRAM PARTICIPANTS SUBJECT TO CHANGE**
Transition:
The Evolving Role of Energy Utilities
SOUTHERN CALIFORNIA CHAPTER OF THE ASSOCIATION OF ENERGY ENGINEERS (AEE SoCal)
ANNUAL CONFERENCE—SEPTEMBER 25, 2014
SOCALGAS COMPANY ENERGY RESOURCE CENTER (ERC), DOWNEY, CALIFORNIA

AEE SoCal Welcoming Presenters

Welcome to the SoCalGas Energy Resource Center
Rodney Davis, SoCalGas ERC Operations Manager

Welcome to the AEE SoCal Annual Conference—Opening Remarks
Richard Hack, AEE SoCal President
Alan Ring, AEE SoCal Annual Conference Chairman

SoCalGas Customer Programs Update
Dan Rendler, Director of Customer Programs & Assistance, So. Cal. Gas Co.

Technology Visionary Speaker:
Dr. Scott Samuelsen, Ph.D.
Professor Emeritus, Mechanical and Aerospace Engineering
Director, National Fuel Cell Research Center

Dr. Samuelsen directs the Advanced Power and Energy Program (APEP), which encompasses the National Fuel Cell Research Center (NFCRC), the UCI Combustion Lab (UCICL) and the Pacific Consortium on Energy and the Environment (PARCON). Dr. Samuelsen is interested in energy conversion, fuel cells, combustion, fuel sprays, laser diagnostics, air quality, turbulent transport, alternative fuels, the modeling of reacting flows, practical energy systems, and the conflict between energy and the environment. His current research activity focuses on energy generation, distribution and utilization, and includes the production of electricity, motive power and propulsive power from both fuel cells, gas turbines and hybrids of both. His work also explores the environmental impact of these energy systems, the dynamic between energy generation and atmospheric quality, and the development of environmentally preferred, high-efficiency energy generation integrated into buildings and building complexes. His work at the UCICL is directed toward the development of advanced stationary gas turbine power systems. Research at the NFCRC is leading the evolution of power generation fuel cells, and the PARCON accelerates the development and deployment of advance energy systems around the world.
Dukku Lee is the General Manager of Anaheim Public Utilities. He directs and manages the supply, delivery, and capital improvements for both the electric and water systems that serve Anaheim’s diverse customer base which includes 348,000 residents, 15,000 businesses and over 20 million visitors annually. He is also responsible for the 370 employees that deliver day-to-day operations, maintenance, engineering, financial services, customer service, and compliance functions. He has 20 years of experience in the utility industry, and previously worked for Southern California Edison and Paragon Consulting Services. He is a Board member for the Southern California Public Power Authority and the California Municipal Utilities Association. He has a Bachelor of Science degree in Electrical and Computer Engineering from California State Polytechnic University, Pomona and a Master of Science degree in Engineering Management from California State University, Long Beach and is a registered Professional Electrical Engineer in the State of California.
Ricson Chude, P.E., CEM, CEA
DSM Engineering / Project Engineering & Special Projects
Southern California Edison

Ricson Chude is a professional engineer working for Southern California Edison (SCE) in the Project Engineering & Special Projects team of the DSM Engineering group. He currently supports SCE’s Energy Efficiency Programs by supervising engineering firms that perform technical analysis of customer submitted energy efficiency projects involving the Retro-commissioning (RCx) of HVAC systems, Optimization of Industrial Processes, and Major Retrofit of key equipment found in Compressed Air and Refrigeration Systems. At SCE he’s been actively involved with managing the development, testing, and deployment of several applications and energy simulation tools currently in use by SCE field reps and engineers alike to scope and document energy savings potential of projects. In the past he’s also worked closely with program managers to design program measure offerings; including incentives tier levels, eligibility requirements, and measure specifications. Ricson is passionate about reducing the impact buildings and equipment have on the electric grid and the environment; that’s why he is currently serving on the Board of Directors of the ASHRAE Southern California Chapter, RESNET Software Accuracy Working Group, and was past Regional Chair for USGBC’s Green Schools Program. Ricson Chude holds a Master of Science in Engineering Management from California State Polytechnic University of Pomona, and a Bachelor of Science in Mechanical Engineering from the California State University of Los Angeles. He is a licensed Mechanical Engineer in the State of California and is recognized as a Certified Energy Manager (CEM) and Certified Energy Auditor (CEA) from the Association of Energy Engineers.
Bret Adams
Director of Business Development
EnerVault

Mr. Adams has over 25 years experience in technology related business development, marketing and product development. He spent several years driving the development of new energy technologies where, recognizing the need for energy storage to enable wide-spread use of renewable energy, create greater system-wide efficiency of the current generation fleet, and enable higher grid resilience, he decided to pursue utility scale energy storage systems, joining EnerVault in 2011. In his role at EnerVault, Mr. Adams has been an advocate for energy storage, speaking frequently at policy related forums, meeting with regulators, and working through energy storage trade groups in the US and Europe. He recently actively participated in forming the landmark, 1325 megawatt California storage mandate of AB 2514, participating in the California Public Utility Commission’s proceedings, co-authoring use-cases, collaborating with stakeholders, and providing comments, analysis, and data. Prior to his activities in advanced energy technologies, Mr. Adams spent several years in market leadership positions at major semiconductor equipment suppliers. He has been granted 15 US patents and has authored several technical papers. Mr. Adams holds a Masters of Business Administration from the McCombs School of Business, University of Texas at Austin and a Bachelor of Science degree in Mechanical Engineering from the University of California at Berkeley.

Christopher Lohmann
Vice President, Alternative Energy Solutions (AES)
Energi, Inc.

As Vice President of AES, Chris focuses on managing the growth of Energi’s AES Warranty Programs—which recently announced projects in Hawaii and Toronto—as well as program development, business development and building strategic relationships. He will work closely with Energi’s partners, insurance brokers/agents, policyholders and various stakeholders across the market, including banks and financial institutions that lend on renewable and energy efficiency projects. Lohmann was a Senior Finance Policy Advisor at the Department of Energy, where he led the development of finance policy for the Office of Energy Efficiency and Renewable Energy. While at DOE, Lohmann developed and led program activities to drive private capital investment in advanced domestic clean energy technologies. Critically, he assisted state and local governments in the establishment of more than 100 energy financing programs utilizing federal funds, which helped to raise more than $1 billion of committed private capital. During his time at the Department of Energy, he helped to create a shift in public and private attitudes towards renewable energy and energy efficiency.
Mr. Sperberg has managed development and implementation of advanced energy projects for over thirty-five years, and has been involved in numerous policy and program development initiatives. As the President and founder of Onsite, he is responsible for having developed Onsite into an innovative leader in the analysis, engineering, development and construction of energy efficiency and distributed generation projects. Rich has been a pioneer in the ESCO industry, successfully working in close coordination and collaboration with utility companies on such innovative programs as SCE’s Demand Side Bidding Pilot in the mid 1990’s, and the Standard Performance Contract program starting in 1997, when he was instrumental as the ESCO industry’s representative to the California Board For Energy Efficiency (CBEE) in shaping the future of energy efficiency programs in California. For the last ten years, Rich has led Onsite Energy’s focus on Industrial Energy Efficiency and Onsite has become the leading third party contractor for Southern California Edison and San Diego Gas and Electric, focused on industrial energy efficiency and demand response projects. As a general contractor, Onsite has also completed the construction of energy efficiency projects at over 50 industrial customer facilities. Prior to founding Onsite, Rich led projects on behalf of the Gas Research Institute and the U.S. Department of Energy involved in cogeneration, fuel cells and advanced nuclear power reactor development.

Education and Certificates
Bachelor of Science – Nuclear Engineering, University of California, Santa Barbara
Masters of Science – Nuclear Engineering, University of California, Los Angeles

Professional Associations
National Association of Energy Services Companies (NAESCO) – Board of Directors, Past President
American Cogeneration Association, Past President
Institute of Electrical and Electronic Engineers
IEEE/IAS Cement Industry Committee Member

Licenses
California State Contractor License # 479491
Co-Presenters:

Dan Cohee  
Vice President  
PDE Total Energy Solutions  

Dan leads the design, implementation, integration and construction of advanced energy storage and distributed generation projects for PDE. He led groundbreaking projects of grid tied lithium ion energy storage for a California Municipal Utility and completed a microgrid installation which combined solar, fuel cell, clean burning generator, and energy storage. He has managed design-build of over 30 MW in DC energy storage projects. Dan also is the technical lead on the ESTCP 2012 Sodium-Metal-Halide Battery Energy Storage project at 29 Palms Marine Corps Air Ground Combat Center. Forbes Online recognized this project as a “Top 12 Energy Project in 2012”. Dan led the team on PDE’s leading-edge, Smart Microgrid project at the Electrical Training Institute. The system is a first of its kind, combining energy storage, solar generation, electrical vehicle charging and building load management in one unit. This project was awarded the 2013 Los Angeles National Electrical Contractor’s Excellence Award. Dan is currently leading the design efforts for a smart microgrid project at Penn State University and for an off-grid system in the Caribbean where PDE is providing EPC for an energy storage system to support a 1MW solar installation and reverse osmosis plant. This will be the largest installation of its kind in the region and is a potential game changer for energy policy and delivery in the region. PDE was recently selected as EPC for the largest privately owned Net Zero Energy retrofit in the U.S. Prior to joining PDE, Dan was responsible for 5 western states at MCI Telecommunications (now Verizon) and successfully managed over 60 million dollars in electrical, mechanical, and control construction projects. Dan attended California State University Long Beach and holds a bachelor’s degree in Political Science.

Dr. Ryan Wartena  
Chief Executive officer and Founder  
GELI  

Ryan directs the Vision, Strategy, and Articulation of GELI’s business and products including the EOS (Energy Operating System) to deploy an Internet of Energy. Prior experience includes developing Li-ion battery architectures and materials, designing and patenting novel energy systems, and integrating energy storage systems into the grid. Ryan holds degrees in Chemical Engineering from UC San Diego and the Georgia Institute of Technology, where he earned his Ph.D. in 2001. As a post-doctoral researcher at the Naval Research Lab in Washington DC, Ryan set up a battery development and testing laboratory and worked on energy harvesting and micrabattery technologies. His development of micro- and nano-batteries continued at Massachusetts Institute of Technology where he helped drive the scientific team that introduced the world’s first self-assembled battery.
Co-Presenters:

Karen Bertram  
Executive Manager  
GridRx

Karen Bertram, as COO of GridRx, is working to commercialize their “Smart” Wireless Transforming Monitoring System. This system integrates a proprietary operating intelligent platform in the device and a supporting platform in the Portal that can interface with user-friendly applications, reports and analytics designed to convert data into useful information that can be delivered to utilities. Karen is also President of Integrated Energy LLC, a company that specializes in the commercial implementation of waste conversion technologies. The company focuses on engineering, pre-development services and installation of “turnkey” Waste-to-Energy solutions. With over 12 years of experience in the development and commercialization of waste conversion technologies, she has also functioned as a Project Manager for several installations and compiled procedures and maintenance schedules for commercial operations. This experience has allowed her to implement a waste conversion technology for one of the first DoD’s commercial installations of a “Waste-to-Energy” facility in California that will be operational in 2015. Her participation in both companies crosses over. As a renewable energy source that will be introduced into the transmission lines, the GridRx devices will be used as part of this DoD project for Measurement and Verification of the energy generated as well as the power quality. Karen Bertram saw an increasing need for information by the utilities, as renewable energy output being driven back into the grid continues to grow. Her experience with the successful implementation of projects has been based on continued evaluation of operational/performance data allowing for a comprehensive technical and financial analysis. These analytic models and the new “smart” devices with integrated operating intelligent platforms allowing for “real time” data to be used immediately can result in both short and long-term economic benefits for utilities. Based on her experience she has participated on numerous panels and has been a guest speaker at many conferences, both in the US and internationally.

William J Garnett  
Managing Director  
Janas Associates, CARE Funding

Mr. Garnett is a veteran Financier and deal-maker known for his knowledge, integrity and extensive relationships. Prior to forming Clean & Renewable Energy Funding, Mr. Garnett was a Managing Director of Clean Energy Capital Securities, LLC, an investment banking and financial advisory firm serving clients active in renewable energy project finance, structured financing and general equipment sales financing. Previously, Mr. Garnett led National City Energy Capital’s renewable energy and energy conservation financing business development nationwide. His group generated analyzed, structured and funded over $250 million annually in renewable energy, energy efficiency projects and general equipment financing activities nationally. His business unit also generated over $400 million of general business equipment lease and structured financing nationwide. He spent over 20 years as founder and owner of a nationally recognized equipment leasing company where he implemented vendor financing programs for companies including BP Solar, Xerox, Crown Bus Company and Cal Air/JCI among others. He has served as a board member of the Equipment Lessors Association and has been a frequent panelist and speaker at renewable energy project financing conferences nationwide. Mr. Garnett holds a Bachelor of Sciences degree in Economics from Loyola University, Los Angeles.
16—Accurate Metering Products & Services
9—Acutherm, Inc.
1—AESC Inc.
5—Blanchard Associates
8—Blue Pillar
14—Duthie Power Services
6—EMCOR Services/Mesa Energy Systems
17—E-Mon
10—Energi, Inc.
18—Facility Solutions Group
22—GridRx

23—Lockheed Martin Corporation
15—MCS Measurement Control Systems
19—Occidental Energy Marketing
7—OPTO 22
13—Parker Boiler
20—SCE Energy Education Center - Irwindale
3—Ship & Shore Environmental, Inc.
4—South Coast Mechanical & Electrical
21—Western Energy Systems
2—Yorke Engineering LLC
TRANSITION: THE EVOLVING ROLE OF ENERGY UTILITIES

Conference Chairman: Alan Ring
Site Management: Dan Rendler, Rodney Davis, Larry Bennett — So Cal Gas Energy Resource Center (ERC)
Registration Logistics: Monika Cornelius, Cornelius & Associates, Huntington Beach CA — cornelius.assoc@verizon.net

AEE SoCal Chapter Leadership

President Richard Hack rhack@uci.edu
Vice President Alan Ring alan@aeesocal.org
Treasurer Gene Beck gene@aeesocal.org
Director Serge Adamian
Director Jasmine Gin
Director Nataka White
Director James Soupos
Director Heather Gantner
Director Bill McNeese
Director Don Musser
Director Thomas Miller
Director Paola Chavira
Chapter Administrator Monika Cornelius monika@aeesocal.org
Stay active with AEE SoCal throughout the year! Our Chapter holds meetings on a regular basis in the Los Angeles / Orange County area: www.aeesocal.org/chapter-meetings

Want to join AEE SoCal? You can register for an AEE SoCal Annual Membership at:
www.aeesocal.org/chapter-membership

The AEE SoCal Board of Directors thanks you for participating in our 2014 Annual Conference:

_Transition...The Evolving Role of Energy Utilities_

We look forward to seeing you next year.
CONFERENCE AGENDA, SPEAKERS AND PROGRAM PARTICIPANTS SUBJECT TO CHANGE