

Mark S. Shirilau, PhD, PE

Primary Experience

1989–Present **President and CEO** **Irvine, CA**

Aloha Systems, Incorporated

- Chief executive of engineering consulting and general contracting firm.
- Institutional, industrial, commercial, and residential energy efficiency
- Utility program research, measurement, and evaluation
- Assessment and evaluation of new and developing electrotechnologies
- Renewable energy supply and distributed generation assessments
- Electric service provider rate optimization
- Market research and consumer opinion studies
- Residential and commercial construction

1983–1989 **Supervisor/Project Manager** **Rosemead, CA**

Southern California Edison Company

- **Corporate Research and Development Department:** Technical and financial evaluation, assessment, and contracting of major projects for wind, solar, and other renewable energy power plants.
- **Residential Conservation Program:** Supervised staff of engineers and other professionals responsible for setting standards and evaluating technical aspects of residential conservation program on company-wide basis. Provided training and advanced assistance to division-based energy services representatives.
- **Customer Energy Services Division:** Designed, implemented, and managed major research projects in areas of residential, commercial, and industrial energy use and demand-side management, including project planning, design, contracting, field construction, engineering and econometric evaluation, management of consultants, preparation of final reports, and preparation of professional papers and oral presentations.
- **Residential Energy Usage Comparison Project:** Full responsibility for \$4,000,000 research project of SCE and EPRI.

1978–1983 **Manager, Administrative Services** **Santa Ana, CA**

EECO Incorporated

- Multifaceted responsibilities at medium-sized electronics manufacturer.
- Energy management and telecommunications
- Patent review and registration
- Corporate policy manual
- Security, facilities planning, and miscellaneous functions

Teaching Experience

- 2001–Present** **Lecturer, Electronics** **Glendora, CA**
Citrus Community College
- Lecture and laboratory courses in electronics and electrical theory
- 1983–1991** **Engineering Professor** **Orange, CA**
West Coast University
- Part-time instructor of upper division and graduate courses.
 - Generation, transmission, electromechanical devices, magnetic theory, control systems, measurement devices and strategies, R&D and project management, engineering economics, kinematics, power systems, economic design analysis, professional practices, ethics, mathematics, physics, and materials sciences courses.
- 1981–1982** **Lecturer, Electronics** **Santa Ana, CA**
Rancho Santiago Community College
- Vo-tech courses in electronics, electrical theory, and technical management
 - Advisory committee of community college and industry representatives
- 1977–1978** **Lecturer, Electrical Engineering** **San Luis Obispo CA**
California Polytechnic State University
- Lecture and laboratory courses in power systems, machines, electronics, circuit theory, and semiconductor devices.

Education

- 1989** **University of California** **Irvine, CA**
Ph.D., Electrical Engineering
- Electric power systems, generation, transmission, distribution, control, design, management and operations
 - Dissertation on integration of conservation and load management into system planning, DSM affects on overall system operation, and optimization of TOU rate structures for maximum customer, utility, and society benefit.
- 1985** **Claremont School of Theology** **Claremont, CA**
M.A., Religion
- Seminary of the Episcopal Church
- 1980** **University of California** **Irvine, CA**
M.S., Business Administration
- Business management, operations research, financial accounting
- 1978** **Calif. Polytechnic State Univ.** **San Luis Obispo, CA**
Master of Engineering, Electric Power Systems
- Design of transmission and distribution systems
 - Operation and control of power plants and electromechanical devices
- 1977** **University of California** **Irvine, CA**
B.S., Electrical Engineering
- Electric power systems; also electronic, mechanical, and civil engineering

Certifications and Licenses

Registered professional electrical engineer
California (E-11818)
New York (080236)
Texas (88014)
Licensed general electrical contractor, (B, C-10, HIC, California #541443)
Locksmith (California LCO-3045)
Community college teaching credential, engineering
Certified Thermographer
Notary public
Advanced open water diver (PADI)

Organization Memberships (past and present)

Association of Energy Services Professionals (AESP) [former national exec VP]
Institute of Electrical and Electronics Engineers (IEEE) [senior member]
Air Pollution Control Association
American Society of Heating Refrigerating and Air-conditioning Engineers (ASHRAE)
American Society of Safety Engineers (ASSE)
Association of Energy Engineers (AEE)
Association of Professional Energy Managers (APEM) [national corporate secretary]
Demand-Side Management Society of AEE
Eta Kappa Nu
Heat Pump Council of Southern California [treasurer]
Institute for the Advancement of Engineering
International Association of Chiefs of Police (IACP)
Mensa
Power Engineering Society of IEEE
UCI Alumni Association

Boards of Directors (past and present)

AEA Credit Union
AIDS Interfaith Network of Sonoma County
Aloha Systems, Incorporated
Association of Energy Services Professionals (AESP)
Association of Professional Energy Managers (APEM)
Ecumenical Catholic Church
Ewcon Corporation
Healing Spirit Press
Heat Pump Council of Southern California
Holy Apostles Seminary
Outrider Trucking, Inc.
Pacific Bears
Ryukendo Karate Institute
Sweetwater Springs Water District

Publications

Power 101: A Basic Introduction to Electric Utility Power (1998). Book helping residential and commercial customers in a deregulated electric market.

"Adjusting End-Use Data for Time-of-Use Rates." Western States Load Research Group, Boise, ID., April 1990.

"Applications of Electric Heat Pumps." *The Heat Pumper*, Vol. 2, Aug 1989.

"Commercial Heat Pump Water Heating Applications." EPRI Water Heating Workshop, St. Louis, MO., June 1990.

"Complexities of Cost-Effectiveness, The" *The Heat Pumper*, Vol. 1, Aug 1988

"Computerized Data Collection for End-Use Experiments." *IEEE Computer Applications in Power*, Vol. 1, No. 1, Jan 1988.

"Design of a Utility competitive Assessment Experiment: The Residential Energy Usage Comparison Experiment." IEEE Power Engineering Society, San Francisco, CA., July 1987. *IEEE Transactions on Power Systems*, Vol 3, No. 3 (Aug 1988), pp. 1298-1305.

"Development of a Heat Pump Association." EPRI/EEI Meeting Customer Needs with Heat Pumps Conference, Atlanta, GA., Nov. 1989.

"End-Use Data Adjustments Under Time-of-Use Rates." Second Annual Conference on End-Use Load Information and Its Role in DSM, Irvine, CA, July 1990. (Santa Ana, CA.: Aloha Systems)

"End-Use Load Information for Effective Energy Management." IEEE Industrial Applications Society meeting, May 1991.

"Engineering and Econometric Design of a Utility Competitive Assessment Experiment, The: The Residential Energy Usage Comparison Project." 10th World Energy Engineering Congress, Atlanta, GA., Oct 1987. *Integration of Efficient Design Technologies*, pp. 453-458. (Atlanta, GA: AEE, 1988.)

"Heat Pump Water Heaters Benefit Laundromat Owners." (Long Beach, CA: Heat Pump Council of Southern California, Sept. 1988.)

"Integrating Market Research Information with End-Use Load Data for Analysis of Technologies' Acceptance and Efficiency." Demand-Side Management Strategies for the 90's, Cincinnati, OH, May 1989. (Palo Alto, CA.: EPRI CU-6367.)

Methodology for Integrating Time-of-Use Rates in Residential Demand-Side Planning, A. Doctoral dissertation, UC Irvine. (Santa Ana, CA.: Aloha Systems, 1989.)

"Preliminary Results of the EPRI/SCE REUC Project." Western States Load Research Group, Costa Mesa, CA., Sep 1989.

"Quantitative and Qualitative Comparisons of Induction, Resistance, and Natural Gas Residential Cooking." Proceedings of the 39th Annual International Appliance Technical Conference, pp. 355-366. (Madison, WI., May 1988.)

"Review of World-Wide Heat Pump Innovations: A Discussion of the 3rd IEA Heat Pump Conference." 13th World Energy Engineering Congress, Atlanta, GA., Oct. 1990.

"Trade Allies in Heat Pump Marketing." EPRI/EEI Meeting Customer Needs with Heat Pumps Conference, Atlanta, GA., Nov. 1989.

"Cost Effective Metering for End-Use Analysis" 11th National Energy Services Conference, New Orleans, LA., December 5, 2000.

"Low Cost Approach to Metering for End-Use Analysis" (With Mark S. Martinez, Southern California Edison). Western States Load Research Association Conference, Phoenix, AZ., October 27, 1999.

"Surfing the Pacific Intertie": What to Learn While Rolling Through a Blackout." Western States Load Research Association Conference, Fort Worth, TX., April 25, 2001.

"Stability of the Pacific Intertie": Public Testimony Regarding the System Disturbance of August 12, 1996. Testimony before the California Public Utilities Commission, San Francisco, CA., August 21, 1996.

"Scheduling Rotating Outages Within All of California", Public Commentary to the Public Utilities Commission, San Francisco, CA., May 26, 2001.