

1 Nov, 2011

CURRICULUM VITAE - ROD BERGEN, P.E.

Solar Energy Systems Consultant

EDUCATION

Rensselaer Polytechnic Institute. - Degreed Electronics Engineer (B.E.E.)
University of Calif. Los Angeles - Engineering, Mathematics, Psychology & Solar Energy
Minneapolis-Honeywell Inc. - Energy Management Systems Analysis and Design
Siemens Solar Industries - Photovoltaic Technology and System Design
Kyocera Solar Inc. - Advanced Utility-Tie Photovoltaic Design & Installation
Xantrex Technology, Inc. - XW System Product Knowledge and Installation Training
L A Dept of Water and Power - Approved Solar Electric Design & Installation Methods
Presenter – Solar Technology – Past four AEE Annual Solar Conferences, Mesa, AZ
SMA Solar Academy - PV Inverter Design, Installation, Fault Analysis & Communications
Solar Energy International - Advanced Solar Energy Theory and Applications Workshop
NABCEP (North American Board of Certified Energy Practitioners) Continuing Ed. Credits

QUALIFICATIONS

Licensed by State of California as a Registered Professional Engineer,
(Control Systems Engineering, license #CS1806)
Licensed by State of California as an Electrical, Mechanical, Plumbing
and General Contractor (licenses #448478 & #443617)

SOLAR ENERGY TEACHING POSITIONS

University of Calif. Los Angeles (UCLA) Engineering Department (Instructor)
Santa Monica College (Adjunct Professor)
Los Angeles Workforce Development Program (past)
Los Angeles Community College District (Tentative)
Pierce College, Woodland Hills, Ca. (past)
Cal State University Northridge, Ca. (past)

COMMENDATIONS

A Certificate of Commendation from the City of Los Angeles for work performed as a
key member of the Los Angeles City Solar Task Force.
A Certificate of Merit from the ASPE (American Society of Plumbing Engineers)
for conducting nation-wide Solar Energy seminars for Professional Engineers

ADMINISTRATIVE/ADVISORY

Founding Director of CALSEIA (Calif. Solar Energy Industries Assoc.)
CALSEIA Ethics Committee Chairman, Ways & Means Committee Chairman,
Standards, Certification and Testing Committee primary member
American Building Contractors Assoc. Solar Energy Committee Chairman
Appointed by L.A. Mayor Tom Bradley to the Los Angeles Solar City Committee
Appointed by the Calif. State Contractors License Board to help define California's
licensing classification for Solar Contractors.
Appointed by the Los Angeles Valley College to their Engineering Advisory Committee.
Selected by the So. Calif. Edison Co. to participate in their off-grid Solar Electric Program.

SOLAR CODES AND STANDARDS

Appointed by Los Angeles Mayor Tom Bradley's Office to help write the Los Angeles City Solar Code.
Appointed by the Los Angeles City Council to develop the Los Angeles City Solar Energy standards.
Selected by the American Society of Plumbing Engineers (ASPE) as a member of their technical task team to write their Solar Energy System Design Manual.
Appointed by L.A. County Board of Supervisors to help prepare the Los Angeles County Solar Energy Code.
Appointed by the International Assoc. of Plumbing and Mechanical Officials (IAPMO) to help prepare the national Uniform Solar Energy Code.

TECHNICAL INSTRUCTION/PRESENTATIONS

Retained by the ASPE to teach their nation-wide technically intensive solar energy seminars to Professional Engineers in New York and Chicago.
Retained by the League of California Cities to conduct solar technical code sessions for the California Association of Business Officials (CALBO).
Retained by the Calif. Association of School Business Officials (CASBO) to address their Operations Research and Development Workshops.
Selected by Hughes Aircraft Co. to address their senior level technical personnel on advanced Solar Energy Technology.
Selected by the U.S. State Department to brief foreign personnel (from France and Japan) on the status of solar energy technology in the Los Angeles area.
Selected by the Solar Energy Industries Assoc (SEIA.) to address the federally sponsored National Solar Heating and Cooling Workshop on automatic microprocessor- based solar control technology.
Participated in U.C.L.A. technical presentations in the early days of Solar Energy
Selected by Los Angeles Dept. of Water and Power to address their technical personnel on Solar Thermal Energy technology.
Retained by the International Spa & Tub Institute to address their technical symposium on Solar Energy.
Conducted "in-house" solar energy seminars for construction personnel.

DESIGN/CONSULTATION

- Retained by the City of Los Angeles (Dept. of Public Buildings) to design a Solar Energy Thermal System for the Wilshire Division of the Los Angeles Police Department.
- Retained by the So. Calif. Gas Company as their primary solar technical consultant
- Retained by the So. Calif. Edison Co. to evaluate, maintain, monitor and repair their solar energy system at their main SCE Rosemead facility.
- Retained by Reynolds Aluminum Co., Solar System Div. to advise them on future solar product development.
- Retained by an architectural firm in Santa Monica as a solar technical expert in Santa Monica City Planning meetings.

SOLAR ENERGY AND ENERGY MANAGEMENT PROJECTS

- L.A. City Dept. of Public Bldg's, Los Angeles, Ca. – Obtained a U.S. Dept. of Energy Grant (of over \$250,000) for L.A. City, to design, fabricate and install a total solar thermal system for the Wilshire Div. Station of the Los Angeles Police Dept. Performed all of the initial system design.
- St. Joseph's Medical Center, Burbank, Ca. – Designed, developed and installed a computer-controlled load scheduler to reduce the operating costs of their hydronic chiller, critical zone, cooling system.
- Magnasync/Moviola Corp., North Hollywood – Designed, developed and installed a complete facility load management system using state-of-the-art Minneapolis Honeywell equipment to reduce overall electrical consumption and improve energy use reliability.
- Bechton-Dickenson Pharmaceutical, Oxnard, Ca. – Designed, developed and installed a priority energy management system to assure peak cost-effective plant operational energy integrity.
- Occidental College, Eagle Rock, Ca. – Designed and proposed a totally integrated energy optimizer system to provide automated load control, solar thermal energy supplementation and on-line real-time dynamic system monitoring.
- Pacifica Corp., Westlake, Ca. - Successfully completed a large residential solar development projects (186 homes) in Newbury Park, Ca. in concert with Reynolds's Aluminum Co.
- Prince Hotel, Los Angeles, Ca. - Designed, fabricated and installed the complete electrical control system for California's first Solar Powered Hotel Air Conditioning System.

SOLAR ELECTRIC PROJECTS

Designed, fabricated, installed and made operable many solar electric systems including some of the following:

- Motion Picture Actor - Ed Begley Jr. - Studio City, Ca.
- Motion Picture Actor - Chevy Chase - Pacific Palisades, Ca.
- TV Newscaster - Patrick Healy - Pacific Palisades, Ca.
- Motion Picture Producer - David Zucker - Ojai, Ca.
- Motion Picture Actress - Jane Seymour - Malibu, Ca.

NOTEWORTHY ITEMS

- Managed Southern California's oldest "full-service" solar energy company (since 1975)
- Developed the California Solar Bonded Warranty Consumer Protection Program and issued California's first Solar Bonded Warranty.
- Named by the Los Angeles Times as one of California's "Solar Pioneers" in a 1979 newspaper article.
- Obtained the first building permit ever issued in Ventura County, California for a private residence that would receive all of its space and water heating strictly from solar energy (no fossil-fueled back-up system required).

COMPANY EXPERIENCE

Quantum Sciences, Inc., President

Solar West International, C.E.O.

SWI provides technical and other assistance, as required, to international renewable energy companies at their respective locations.

SWI also supports foreign organizations that are seeking business opportunities in renewable energies within the United States.

Quest Electric Systems, Chief Engineer

Quest is a full-service electrical design & installation company that, in addition to implementing conventional electrical power sources, also uses solar electric photovoltaic systems to provide off-grid and grid-tie, primary (and back-up power) capability.

Solar-West Construction Co., General Manager

Solar-West Construction Co. is dedicated to performing the total design, development and implementation of solar energy systems (both thermal and electric) for residential, commercial and industrial applications.

The Energy Warehouse (currently inactive), Operations Director

The Energy Warehouse distributed solar and related energy equipment to the building industry.

PRIOR EXPERIENCE

Solar Systems Consultant, to the Alta Vista Construction Co., Washington D.C.

Advised in the development of an advanced, hybrid (thermal, photovoltaic), flat-plate solar collector system that was funded by the Italian government.

Aerospace Industry (18 years)

Performed the initial system analysis, hardware/software design and final configuration performance evaluation that was associated with many complex large-scale computer-controlled automated systems (implemented in several major military applications) as follows:

Sr. Research Scientist, Lockheed California. Co. - Rye Canyon Research Labs

Sr. Staff Engineer, Emerson Electric Co.- Computer Controlled Systems Div.

Section Head (Act.), Hughes Aircraft Co.- Automated Controls, Data Systems Div.

Systems Engineer, Nortronics Div. of Northrop Corp. - Guidance and Controls Div.

Electronics Engineer, Hughes Aircraft Co. - Airborne Computer Systems, Field Services Div.

Associate Engineer, Douglas Aircraft Co. - Computer Operations Lab.

PERSONAL – SECURITY

Secret and Top-Secret Clearances issued by the U.S. Air Force
Extensive background check by the L.A. County Sheriff's Dept.

PROFESSIONAL ORGANIZATIONS (PAST AND PRESENT)

Solar Energy Industries Assoc. (Statistics Committee)
Calif. Solar Energy Industries Assoc. (Charter Member)
International Solar Energy Society
Southern California Chapter of ISES
American Building Contractor's Assoc.
American Society of Plumbing Engineers
American Society of Mechanical Engineers
Association for Computing Machinery
Institute of Electrical and Electronic Engineers
Association of Energy Engineers (Charter Member)
American Society of Solar Engineers
Southern California Solar Energy Industries Assoc. (Charter Member)