



SENIOR PROGRAM MANAGER

Name of Firm: ECC and Aloha Solar Energy Fund II

Name of Staff: Richard A. Fryer, CEM, LEED AP, CFM

Profession: Senior Program Manager, Energy

Nationality: USA

Years with Firm/Entity: 9.5

Membership in Professional Societies: Fellow, Society of American Military Engineers; Legend, Association of Energy Engineers

Mr. Fryer has 39 years of energy program management experience, both in the Federal section during his 29-year Air Force career, and in the Private sector as ECC's Energy Program Manager. His Federal energy management experience includes serving as the installation energy manager at three Air Force bases, as well as, in Major Command and Headquarters Air Force (AF) level responsibilities. As Commander of the Air Force Civil Engineer Support Agency (AFCESA), he created the AF Facility Energy Center and was directly involved in the creation of AF energy policies and the AF Facility Energy Strategic Plan. His private sector energy management experience includes the successful proposal, award, and management of several large multiple-award, multiple task order contracts with Federal agencies and the development of several utility-scale solar energy projects for Federal and Utility Company clients.

Education:

Master of Science, Engineering Management, Air Force Institute of Technology, Dayton, Ohio, 1987
Bachelor of Science, Mechanical Engineering, University of Massachusetts at Amherst, 1979
Marine Corps Command and Staff College, In Residence, Quantico, Virginia, 1992
Certified Energy Manager (CEM), Certification No. 16185
Certified Facility Manager
LEED Accredited Professional

Employment Record:

ECC, San Antonio, TX (September 2008-Present).

Senior Program Manager, Energy, September 2008- Present: Leads the ECC Energy Team, managing and coordinating the growth of energy-focused, single projects to multiple-award, ID/IQ contracts. Provides technical support to project and program managers across the company to capture and execute energy-focused projects. Lead for capture, financing, and long-term management of public-private ventures (PPVs) such as energy savings performance contracts (ESPCs) and power purchase agreements (PPAs). Hawaii PV projects include:

- The Navy Hawaii PPA contract involving one large ground-mount PV system and multiple rooftop and elevated systems, totaling 17 MWdc. Coordinated with the US Navy, the USMC, financiers, the local utility company, various State of Hawaii offices, and multiple subcontractors. Started development of the project in 2010 with submission of a winning proposal and achieved a signed PPA in 2014 resulting in financing and start of construction in 2015. Financing was represented by a membership interest purchase by a mainland-based company, but ECC and Mr. Fryer continue to lead and manage the project through construction completion.
- Developed utility-scale 6 MWdc/6 MWac project in Hawaii under a Public Utilities Commission (PUC)-approved renewable energy feed-in-tariff (FIT) program. In 2011, signed a letter of intent with a local land owner. Coordinated with all local housing authorities and community councils to obtain approvals for a conditional use permit. Secured financing for the project, obtained city, county, and state permits, as well as a signed PPA with the local utility, obtained local PUC approval for connection to a 46,000 volt distribution line. Marketed, obtained proposals, and finalized financing with a mainland investor. Commenced construction during the financing process; executed

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projects for civil, distribution line work, and for substation work. Assisted final owner with project execution and achievement of commercial operations date (COD) in January 2017.

- Developing a 7.5-MWdc/5 MWac system in Hawaii, under the same FIT program as the above project, with land to be leased from a State agency. Responsible for environmental and cultural studies and assessments, obtaining required easements and land rights, conducting inter-connect requirements studies, performing preliminary designs, and negotiating final FIT terms with the Utility. COD for this project is anticipated in late 2018 or early 2019.

Program Manager, JSR-ECC Limited Liability Corporation (LLC), United States Army Engineering Support Center-Huntsville (USAESCH), \$210 million Energy Conservation Improvement Program (ECIP), June 2011 – June 2014: Responsible for overall contract management of projects involving the repair, renovation, conversion, alteration, and construction, as well as the procurement, installation, and maintenance of energy-related technologies/equipment/systems on military and Federal facilities. Responsible for overall program performance, including cost and schedule control as well as the primary POC with stakeholders. Oversees the execution of task orders including the decentralization and decommissioning of a steam power plant being replaced by efficient natural gas heating, and Ground Source Heat Pump Heating Ventilation Air Conditioning (HVAC) systems at McAlester Army Ammunitions Plant, OK. Orchestrated the redesign and replacement of an existing pool water heating system at Vandenberg Air Force Base (AFB) with a solar water heating system.

Program Manager, Pacific Energy Solutions LLC, Navy Hawaii Solar Power Generating Systems Multiple Award Contract, NAVFAC Pacific, Aug 2011- Present: Primary POC with client, financiers, stakeholders, and project execution team to design, construct, commission, interconnect, maintain, and provide long-term operation for approximately 17 MWdc of photovoltaic (PV) systems on military installations in Hawaii under a 25-year power purchase agreement. Largest array was a 13.5 MWdc fixed-tilt, ground mount system on 42 acres on Waipio Peninsula, JBPHH, which went operational in Feb 2017. Other arrays include three roof-mount systems on JBPHH, one roof-mounted system on Camp Smith, two parking lot/sunshade-mounted systems on MCBH, and three roof-mount systems on MCBH. Final two systems projected to be complete by Mar 2018.

Vice President and Program Manager, Pacific Energy Solutions LLC, Solar Integrator Contract, Federal Prison Industries, July 2011- July 2014: Responsible for management of a \$75 million ID/IQ contract, including overall program performance, cost and schedule control, and serving as the primary POC with client, stakeholders, and project execution teams. Performing feasibility studies, site surveys and planning, and project management for design, construction, installation, maintenance, commissioning, financing, and troubleshooting for PV parks/farms, parking lot canopies, and building retrofit/new construction roof-mounted systems.

Air Force Civil Engineer Support Agency (AFCESA), Panama City, FL; Chief Executive Officer, August 2006 – August 2008: Responsible for 400-person agency providing technical and operational support worldwide. Led the USAF “think tank” for energy management, facilities operations, plant operations, infrastructure maintenance, emergency preparedness, contingency response, fire prevention, and PhD-level technical support. Awarded and managed contracts for customers valued at approximately \$500 million annually for energy conservation, infrastructure repair, and facilities maintenance.

Air Force Center for Environmental Excellence (AFCEE), San Antonio, TX; Executive Director, July 2004 - July 2006: Responsible for 430-person agency providing environmental, housing, and construction support worldwide, with annual budgets between \$2 billion and \$3 billion. Provided strategic guidance for natural resources management, cultural resources oversight, environmental compliance, housing revitalization, and major construction oversight and accomplishment. Executed an



annual agency operating budget of approximately \$98 million. Developed and issued USAF LEED program guidance.

3rd Civil Engineering Squadron (CES), Anchorage, AK; Chief Executive Officer, June 2001 - July 2006: Led a 650-person unit responsible for operating and maintain over 10 million square feet of facilities at Elmendorf AFB. Conceived, marketed, and implemented the AF’s largest/most successful energy investment project: a \$55 million heat plant decentralization that reduced the entire Air Force’s energy consumption by 2%.

10th and 510th Civil Engineer Squadrons, USAF Academy, Colorado Springs, CO; Chief Executive Officer, June 1998 - June 2001: Responsible for operations and maintenance of the entire infrastructure for an over 4,000-student prestigious national military academy. Operated two of the largest heat and wastewater treatment plants in the AF; the wastewater plant earned state environmental accolades for the best suspended solids removal in the state.

Multiple Locations, USAF Installation Energy Officer, 1979–1998. Developed installation-specific energy master plans, tracked energy consumption, and performed Defense Utility Energy Reporting System (DUERS) reporting. Developed and advocated for energy efficiency projects, including: **Hanscom AFB, MA, 1982-1986:** Modified 1950s central heat plant to accept alternative fuels and reduce emissions. Installed exterior insulating systems on various structures. Initiated installation-wide mechanical room upgrade program to identify and fix poorly performing HVAC systems; resulted in 11 percent of the energy savings in 1985. Expanded and modernized Energy Management Control System (EMCS) for large facilities. Earned ‘best-in-command’ rating in 1985.

Kunsan AB, Republic of Korea, 1981-1982: Developed and implemented a building envelope modification solution to F-16 simulator with high HVAC energy consumption resulting in an approximately 83% reduction in HVAC energy consumption. Programmed new energy-efficient dormitories and maintenance structures and installation of exterior facility insulation systems (EFIS) for existing 1950s and 1960s metal buildings, reducing facility energy requirements by half.

England AFB, LA, 1979-1981: Served as facilitator and action officer for the base energy management board. Designed and executed a natural gas infrared heating project for an aircraft hangar resulting in 50% reduction over previously inefficient steam heating systems. Designed and executed a JP-4 fuel pipeline replacement to reduce pipeline length, reduce pipe friction and thus, line losses, which resulted in downsized pumps and motors with an estimated 33% reduction in operating energy/cost. Developed a project to install a high SRI (cool) roof on the base hospital.

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