

LILKER EMO DELIVERS LEED® SILVER FOR NAVY LABORATORY

Falls Church, VA, October 21, 2013—Lilker EMO Energy Solutions recently helped a U.S. Navy lab earn a Leadership in Environment and Energy Design (LEED) silver certification for its \$3.5 million, 8,100 square foot aircraft software/systems testing facility.

LEED is the most widely recognized green building certification program across the globe according to the U.S. Green Building Council, which developed the technical standard along with the Green Building Certification Institute.

The Patuxent River Naval Air Station's P-8A Poseidon aircraft Systems Integration Laboratory was a design- build project for the Naval Facilities Engineering Command (NAVFAC) which was constructed by Grunley/Goel Construction and designed by Guiliani Associates. The laboratory will be used for testing systems and software prior to use in http://www.navfac.navy.mil/news/2013%20Press%20Releases/october_press_releases/navfac_pacific_energy.html aircraft. Lilker EMO provided LEED consulting and facilitation services, including goal setting, design team guidance, drawing and specifications review, development of LEED documentation, scorecard and progress tracking, and general sustainability consulting.



The project achieved 21 percent energy savings relative to the ASHRAE 90.1 baseline and was awarded exemplary performance for reducing water use relative to the baseline by 43 percent. The Navy purchased renewable energy for 70 percent of the lab's electricity consumption for two years and 36 percent of materials used (by cost) were recycled-content. The project also featured an emphasis on waste recycling during construction and was able to divert 88 percent of debris from landfills.



“Laboratories have unique demands and commonly use vast amounts of energy and water, sometimes four times per square foot as much as a typical office building,” said Tom Dietsche, Project Manager for Lilker EMO Energy Solutions.

“In this case energy-intensive process loads accounts for 67 percent of total energy consumed within the building and thus greatly affected cooling load and overall energy use; without those special equipment loads the building would have achieved 35 percent energy reduction compared to the baseline.”

The U.S. Government owns and operates more LEED certified buildings than anyone else in the world and, as such, is an established sustainability leader with its own principles. “A

military lab has extra challenges. The U.S. Department of Defense has their own requirements that have to be met in addition to those by LEED, requirements that are both stricter and different. From a security standpoint and even regarding occupant comfort, the standards are quite high,” said Eric Oliver, PE, head of Lilker EMO Energy Solutions. “The Navy was one of the early adopters of sustainable design; they have it embedded in their processes and are committed to ensuring it’s constructed into its projects.”

Some highlights of the building’s sustainable design and construction program, which resulted in LEED Silver certification, include:

- 21 percent energy savings
- 43 percent indoor water savings
- Environmentally friendly HVAC refrigerants
- Preferred parking for low emitting and fuel efficient vehicles
- Stormwater quality control
- Use of interior materials that have little or no chemical emissions
- Focus on lighting quality and thermal comfort for occupants

In addition to implementing these LEED credit strategies the lab achieved innovation points for a green housekeeping program and an environmentally friendly integrated pest management program, which are implemented throughout the base.

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Lilker EMO Energy Solutions is an energy efficiency and sustainability consulting and design firm that performs energy audits, LEED consulting, energy and daylight modeling, commissioning, and energy credit calculations for new and existing buildings. Lilker EMO Energy Solutions is a wholly owned subsidiary of Lilker Associates, an award-winning MEP engineering, technology and energy firm headquartered in Manhattan, with offices on Long Island and in Falls Church, VA.