

Latest News

Rooftop solar system creates electricity-neutral workplace April 1, 2009

ROCKLIN, CALIF.—ECO:LOGIC Engineering—a planning, permitting, design, construction management, and water and wastewater facilities operating firm—added a photovoltaic (PV) solar array on its own 20,000-square-foot rooftop that provides enough power during the day to supply electricity for 60 employees. In addition, ECO:LOGIC optimized and upgraded all fixtures inside the building to save on energy consumption. The combination of the solar project and the fixture upgrades results in a corporate headquarters that is electricity neutral on an annual basis.

ECO:LOGIC used its own electrical, mechanical, structural, and instrumentation engineers to design and install the PV system. "Our folks are pretty meticulous," said CEO, David Bennett. "They designed a well-thought-out, robust system and enjoyed building it too."

ECO:LOGIC purchased the PV panels and DC/AC inverter and designed the complete layout, roof mounts, electrical, and instrumentation system in-house. A common challenge with roof-mounted solar systems is the weight, since many commercial building roofs are not designed to support the added weight of a solar system. ECO:LOGIC's structural engineers analyzed the trusses and designed simple metal braces at strategic points to add the required reinforcement.

Following design and permitting, ECO:LOGIC employees completed all construction of the PV system including the structural upgrades to the building, fabricating the solar panel racks, mounting the panels, setting the inverter, and making all of the electrical connections necessary for a fully operational system.

Financial payback for ECO:LOGIC's headquarters PV system is predicted to be just less than six years. "Whatever happens with the cost of electricity in the years ahead, our cost will still be zero," said Bennett. "Solar is no longer just a cool concept here. We have first hand knowledge of how these systems should be designed, how they are built, how they can be optimized, and how they can be accessorized with controls and monitoring equipment."

This type of system has direct applications for ECO:LOGIC's water agency clients. Pumping and treating water has been identified by the California Energy Commission as one of the most significant electricity uses in the state. Reducing energy use in the water industry is a high priority for water agencies and power producers.

As a result of this experience, ECO:LOGIC has made itself ready to provide a higher level of service to its water and wastewater utility clients as well as increase its own sense of corporate environmental stewardship.

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What clients want

When conducting strategic business planning with an AEC I always ask, "What makes your firm different than your competitors? Why would a client work with you instead of another, similar firm?" Often, firm leaders say that their technical expertise or experience in a certain market make them stand out.

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