

Irvine Unified School District saves money and enriches learning with solar



Located in Orange County, California, the Irvine Unified School District (IUSD) comprises a community of learners, committed to the highest quality educational experience. IUSD educates a diverse population of more than 30,000 K-12 students in 22 elementary schools, six middle schools, four comprehensive high schools and one continuation high school.

Project Profile: Irvine Unified School District

Industry: K-12 Education

Location: Irvine, California

Company: Irvine Unified School District

System Type: Roof and Canopy-Mounted Solar Panels

System Size: 5 MW over 27 Operational Projects

Savings: \$5-11 million over 20 years

Capital Outlay: \$0

Energy conservation efforts have been a longtime focus at IUSD. In 2008, three administrators and faculty were invited to attend an energy conference in Norway by representatives from the Energy Coalition, a nonprofit group. Inspired and informed by the conference, the group began exploring solar energy options for the District.

Challenge

California was in a fiscal crisis in 2009, when the IUSD started work on its solar initiative. The District saw solar as a way to help control its energy costs, while taking an innovative step toward providing clean, renewable power to schools and offices. But like most school districts, the IUSD faced extremely tight budgets, lacking the funding to build, operate, and maintain new projects. District advocates persevered, and developed a budget to present to local solar installers.

"We presented our plan to three installers, and asked them how to best use those dollars," explains Mark Sontag, Math and Science Coordinator, and IUSD's administrative lead on the project. "Two of them told us what kind of system the funds could purchase. But one installer told us to keep our money, and look into a solar Power Purchase Agreement (PPA) instead."

Solution

Working closely with its solar installer, the District reached out to SunEdison and developed a PPA that would enable the District to install and operate a solar solution with no major capital investment.

SunEdison agreed to finance, operate and maintain the systems, enabling the company to take advantage of a variety of tax credits. In exchange, IUSD agreed to purchase energy from SunEdison at a lower rate that was steady and predictable over the long term.

"Another key to the PPA was that the District did not assume responsibility for maintenance," says Sontag. "It was a completely turnkey system. That was very attractive to us, because we were not in a position where we could have hired additional staff to do the work."

The IUSD project employed 20 rooftop panel installations and solar-paneled parking canopies across 24 schools and district facilities. The planning and installation process was very transparent and collaborative.

"The District made a point of engaging the community for feedback, talking to parents and homeowner associations," says Sontag. "SunEdison representatives also attended Board of Education meetings to address technical questions."

SunEdison is a leading provider of solar energy services. Serving business, public sector including schools and universities, utility, and residential customers, SunEdison is dedicated to transforming lives by delivering economical, clean, renewable energy to communities around the globe.

Benefits

The SunEdison solar installation has had an immediate positive impact on the District's energy costs. In the first year, IUSD saved approximately \$220,000 in electricity costs. The second phase of the project is expected to save \$380,000 in energy costs in its first year, public records show. Together, both projects are expected to save the district \$5 million to \$11 million in the next two decades, depending on local utility rates.

The new system also gives the District better visibility into how its energy is used, enabling it to plan and conserve more effectively, through current data provided by the SunEdison Client Connect online portal.

"SunEdison's Client Connect is absolutely essential for us, and brings us much closer to real-time analysis of our energy consumption," says Sontag. "If we spot something unusual, we can address it right away."

The SunEdison solar initiative is part of a comprehensive strategy to reduce electrical consumption across the entire District. IUSD is also setting energy-wise guidelines to help make its heating, ventilation, and air conditioning systems (HVAC) more efficient. The District is also issuing conservation mandates for lighting, thermostat settings, classroom and office equipment, and a variety of other areas. These measures are intended to reduce district-wide electrical usage by 15 percent.

Along with the budget benefits, the District is also making the most of its solar installation to enhance its curriculum.

"We have developed our own fifth and sixth grade curriculum that lets students learn about a variety of types of renewable energy," says Sontag. "We discuss the pros and cons of different types of renewable energy. We are hearing that kids are more aware of things like conservation, recycling, and global warming. And the community appreciates the non-partisan way we present the education."

As the District prepares to construct new campuses, solar has now become an integral part of its planning process. The IUSD is looking forward to extending its renewable energy solutions to more locations in the years ahead.

"We have set up a master agreement with SunEdison for existing sites and future sites," says Sontag. "As new schools come online, it's easier to bring solar into these new sites."

For more information

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