



Case Study

San Francisco Airport



Photo by Trevor Tang

Overview

As part of an ongoing initiative to promote green technologies throughout the City of San Francisco, the San Francisco Public Utilities Commission, together with the San Francisco Airport, recently completed the installation of a large solar power system at the San Francisco International Airport (SFO). To aid in maintaining the system, they wanted a way to monitor and display system performance.

Challenge

SFO, one of the world's 30 busiest airports, and the second largest in the state of California, is a beehive of activity that demands a lot of energy to keep operating. The San Francisco Public Utilities Commission and SFO were interested in projects that would help reduce the sprawling facility's energy needs and promote environmental consciousness.

Solution

In 2001, SFO sponsored a pilot project, installing a 20kW solar array. "That installation proved that solar power was feasible at the Airport," says Adam Lerner, director of energy services for Bass Electric, which was awarded the contract for the much larger 445kW system in 2007. Mounted atop Terminal 3 at the airport, the 2832 SunTech 175 watt panels align with the gentle curve of the building. Panels are affixed to the roof with a SunLink mounting system. Power from the panels feeds into four 225kW SatCon inverters, allowing for future expansion of up to 100 percent.

As an electrical systems integrator, Bass not only installed the solar components, it also installed new switch gear, which allows the Airport to isolate the system for any reason. Bass will also continue to monitor and maintain the system. A key component of that monitoring is delivered by Fat Spaniel Technologies.

Fat Spaniel provides monitoring services, which enables remote management of the system over the Internet from any Web browser. This allows the San Francisco Public Utilities Commission to view real-time system statistics from its offices in downtown San Francisco—20 miles from the airport. The Commission is able to see how much electricity is being generated right now, or over a day, week, or month. "Web access allows Bass Electric to proactively monitor system performance from our headquarters," says Lerner.

Results

The grid-tied system offsets approximately 15 percent of the Terminal's peak daytime power requirements, generating up to 628,000kW per year. Over its 30-year life, the system is expected to reduce carbon dioxide emissions by 7200 tons. Unlike many public infrastructure projects that are completed and soon forgotten, the monitoring capabilities of Fat Spaniel will help sustain awareness and continue to promote green initiatives.

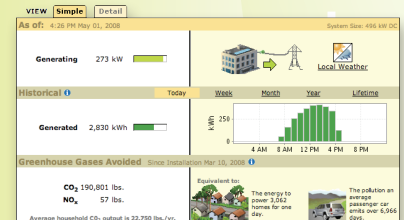
System Specifications

Size	Technology	Expected Energy Production/Yr.	Greenhouse Gas Averted/Yr.
496kW	2,832 175-watt PV modules	628MWh	480,000 lbs.

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Adam Lerner —
Bass Electric



Fat Spaniel Web view enables San Francisco Public Utilities and Bass Electric to track energy production and environmental statistics with real-time and historical data at San Francisco International Airport from any desktop.