

**COMPLETION DATE**

December 2008

**LOCATION**

Pasadena, CA

**INSTALLATION TYPE**

Raised fixed

**SYSTEM SIZE (DC)**

238.68 kW

**PROJECT PROFILE**

# California Institute of Technology (Caltech)

The rooftop solar energy system is the first for the California Institute of Technology (Caltech), and the largest solar energy facility for the City of Pasadena using a solar Power Purchase Agreement (PPA). The system performs above expectation and is an excellent example of a leading college embracing solar using a solar PPA.



## DESCRIPTION

Caltech is the academic home for NASA's Jet Propulsion Laboratory (JPL). The school's mission is to "investigate the most challenging, fundamental problems in science and technology in a singularly collegial, interdisciplinary atmosphere, while educating outstanding students to become creative members of society." Caltech began investigating solar options in 2006 as part of its broader sustainability initiative. The solar PPA was an attractive option for obtaining solar because it required no capital expenditure from the school. Caltech purchases the solar energy from SPP, who operates and manages the system for the life of the agreement.

## CHALLENGES

The system required careful planning to construct a span of its size. SPP worked with an EPC contractor to come up with a cost-effective plan that would solve the engineering challenges.

The elevated structure above the Holliston parking structure on the northeast side of the Caltech campus is composed of specialized space frames that accommodate more modules while maximizing production.

## RESULTS

The solar system was the first of its kind undertaken at Caltech and provided the impetus for students to embark on smaller solar campus projects. Caltech expects to save approximately \$13 million in electricity costs over the PPA term.

The system's annual estimated production is equivalent to removing the following emissions:



245 metric tons of carbon dioxide



34 homes' electricity use



27,809 gallons of gas

*Calculations are according to the US Environmental Protection Agency (www.epa.gov)*



“SPP’s experience making solar power attainable for schools and universities makes for a great long-term partnership. This economic means of gaining solar energy for the campus is part of Caltech’s focus on sustainability and renewable energy. It saves money, fosters awareness, reduces the Institute’s environmental impact, and provides environment stewardship.”

Bill Irwin  
Senior Director of  
Facility Management,  
Caltech

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