

Premier Power constructs 1.2MW SMUD SolarShares in only six weeks



Until recently, people living in the Sacramento, California area interested in using solar electricity had to install photovoltaic (PV) panels onsite. Unfortunately, for some utility customers, their location simply could not support a solar energy system (e.g., too much shade, lack of space or simply that they live in an apartment complex).

SolarSharesSM to the Rescue

However, the Sacramento Municipal Utility District (SMUD), one of the area’s leading advocates for solar power, wanted to make clean energy available to any of its ratepayers. As a result, SMUD created a volunteer program called SolarShares. The program enables any of its customers to buy power from the sun no matter what their housing situation is. And, to make the option more attractive, SMUD wanted to make sure that the ratepayers could buy power generated locally.

SMUD contracted with enXco, an EDF Energies Nouvelles Company, specializing in Power Purchase Agreements (PPA), to build a “solar farm” with the capacity to serve between 800 and 1,000 customers, over about 8.5 acres of land to meet SMUD’s requirements. enXco would own and maintain the solar equipment and SMUD would agree to purchase the electricity at a fixed rate for the next 20 years.

The Sun is up, the Time is Now

By May of 2008, for the program to have maximum impact, the “solar farm” was needed it to start producing electricity as soon

System Overview

System Location Wilton, CA
 System Completion August 2008
 Solar System Type. Leave No Trace Ground Mount
 Total System Size 1,200 kW-DC
 Power Purchase Agreement. enXco

System Configuration

PV modules types First Solar
 Total PV modules used. 17,226
 kW per module 72W

Performance Facts ¹

Estimated annual production 1,820,000 kWh
 Estimated lifetime production 44,000,000 kWh
 Meet annual energy requirements of 187 homes

Environmental benefits, annually: ²

Greenhouse gases reduction (CO₂) 2,855,198 lbs
 Oil not consumed. 3,012 barrels
 Gasoline not consumed 147,003 gallons
 Coal not burned 6.8 railcars
 Offset CO₂ emissions from the energy use from homes. 171 homes

Sources:

¹ PV Watts Solar Energy Calculator (<http://www.pvwatts.org>)

² U.S. Environmental Protection Agency (www.epa.gov/cleanenergy/energy-resources/calculator.html)



“Premier Power did a great job in getting this [project] done not only in a very quick timeframe, but also under really adverse conditions with the smoggy air and over 100 degree temperatures. To get this kind of [project] delivered on time is a real tribute to Premier Power’s ability to get the complex job done in a quick fashion.”

*John DiStasio, General Manager/CEO
Sacramento Municipal Utility District (SMUD)*

as possible, preferably within the next two months during solar’s peak-production period. Several solar installation and integration companies were contacted and presented with the scope of the project. However, with a timeline down to six weeks for completing the installation, only one company stepped up to the challenge, Premier Power.

When asked how it could possibly dig more than 2,300 holes, pour concrete and set as many posts to support the racking and panels in such a short time, Premier Power answered: “Simple, you don’t dig, you don’t pour, you vibrate and push.”

Don’t Dig and Pour Concrete – Instead “Leave no Trace”

In keeping with the environmental benefits of the project itself, not only was Premier Power able to complete the installation quickly, its method of using a VibraHammer to push the poles into the ground, a technique normally associated with construction of highway safety rails, also avoids the environmental impact injecting from 170 to 340 tons of cement into the ground were it to mount the poles using traditional methods. At the end of the project’s life, expected to be beyond 20 years, Premier Power can lift the ballasts and use a reverse-vibration process to pull the poles out for re-use, leaving the land in its original, pre-installation state.

Quick, Efficient and Successful

“This solar energy project is set to benefit SMUD customers directly through its SolarShares program. In order to offer SMUD the greatest impact and benefit, we asked Premier Power to have it installed and ready to produce electricity when it is most needed – the heart of summer,” said Mark Tholke, Regional Development Manager at enXco. “You could say Premier Power ‘shook things up’ as soon as they started vibrating and pushing in the supports. enXco committed to complete this project on time and on budget and thanks to Premier Power’s ability to mobilize equipment, crew and materials so quickly, we accomplished the goal and everyone wins. Put simply, Premier Power delivered.”



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