SOLAR AMERICA SHOWCASE AWARD

Press Conference at SunPower Corporation in Richmond

April 2009

Photo courtesy of Mark Coplan, BUSD

Left to right:

1. Steve Palmeri, Project Officer DOE
2. Timothy White, Assistant Superintendent for Facilities, Oakland Unified School District (OUSD)
3. Tom Kelly, Director, KyotoUSA (Sequoia Foundation)
4. Gayle McLaughlin, Mayor, Richmond/California
5. Bill Fay, Associate Superintendent for Operations, West Contra Costa Unified School District (WCCUSD)
6. Antonio Medrano, Member, Board of Education, WCCUSD
7. Lew Jones, Facilities Director, Berkeley Unified School District (BUSD)
8. Andre Szykier, Maps Capital Management
9. Bill Savidge, Engineering Officer, WCCUSD
10. Pedro Rosado, District Representative, Senator Loni Hancock, Ninth Senate District
11. Lance Jackson, SGI, Program Manager WCCUSD Bond Program
12. Javetta Cleveland, Deputy Superintendent, BUSD

kyotoUSA
U.S. Cities and Their Citizens Working Together to Address Global Warming

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Press Conference: Wednesday, April 29 (3 pm) at SunPower Corp., 1414 Harbour Way South, Richmond. A DOE representative will be present to announce the award.

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3 East Bay School Districts Awarded Department of Energy "Solar America Showcase" Grant

Berkeley, Oakland, and West Contra Costa Unified School Districts will receive up to $500,000 in technical assistance from DOE to assess solar generation potential and develop comprehensive Solar Master Plans to speed the installation of solar in schools across California and the Nation.

Berkeley, California – The U.S. Department of Energy announced that a coalition of East Bay school districts and two local organizations were selected to receive a Solar America Showcase grant. The grant will allow Oakland, Berkeley and West Contra Costa Unified School Districts to receive up to $500,000 in technical assistance from DOE to conduct comprehensive solar generation analyses of district schools and facilities and to develop Solar Master Plans for each District. The coalition includes the Sequoia Foundation, its sponsored project, KyotoUSA, and Moore Iacofano Goltsman, Inc., a Berkeley consulting firm.

The DOE Solar America Showcase award is intended to support companies and local government entities that are "highly committed" to adopt solar technology and to accelerate the installation of photovoltaic (PV) panels across the country. The Sequoia Foundation's application on behalf of the 3 school districts detailed a specific effort to evaluate the energy consumption and solar electricity generation potential on all schools and facilities within the Districts. A successful project will provide a template on which to make well-reasoned choices about which facilities exhibit the greatest solar potential, what type of solar technology is most appropriate for each facility, what types of investments should be made in energy efficiency improvements, and the types of financing mechanisms that provide the best return for the districts. School districts stand to save millions of dollars in energy costs – the result of energy conservation, better energy efficiencies, and renewable energy systems.

During the 18 month grant period, the Districts will select one or more schools to become a "Showcase" where the most efficient and effective solar arrays will be installed.

"Oakland Unified School District is excited to be a participant in this innovative coalition of school districts," said OUSD Assistant Superintendent for Facilities Planning and Management Timothy White. "This grant will provide the type of high level assessment necessary to pave the way for renewable energy systems and energy efficiency improvements throughout the District. We can't wait to get started."

"West Contra Costa Unified School District's Board has committed the District to building sustainable schools and embracing renewable energy systems. Our first photovoltaic project at El Cerrito High School is just the beginning," said WCCUSD Superintendent Bruce Harter. "This Solar America Showcase grant will assist us to identify future opportunities for solar electric systems for our schools."

Berkeley Unified School District Superintendent Bill Huyett is excited about the grant. "We are very interested in exploring solar options for Berkeley's schools, and this grant from the Department of Energy will be a big help. We already have one solar school (Washington Elementary) in the District, so we already see first-hand both the advantages and the potential challenges."

"Over the past two years, we have been talking to school districts throughout California about solar. There are two big challenges for districts – planning and financing. The Solar America Showcase award will go a long way to resolving both issues", said Tom Kelly from KyotoUSA.

The grant award will be announced at a Press Conference to be held on Wednesday, April 29 (3 pm) at the office of SunPower Corp. in Richmond (1414 Harbour Way South). SunPower designs, manufactures and delivers high-performance solar electric systems worldwide for residential, commercial and utility-scale power plant customers.

Berkeley Unified School District
(BUSD)

Washington Elementary School Solar System

Installers prepare the racks for the solar panels that were installed on Washington Elementary in Berkeley in the summer of 2008. The PV system (approximately 100 kW) was designed to meet almost all of the school's electricity needs.

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West Contra Costa Unified School District
(WCCUSD)

El Cerrito High School Solar System

This is a 139kW building-integrated photovoltaic ("BIPV") system with 33,600 sq.ft of Unisolar thin film panels that are laminated to the single-ply membrane roofing system. It was brought on line in November 2008.

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Oakland Unified School District
(OUSD)

Future Solar Project at OUSD

The Cesar E. Chavez Education Center, completed in 2003, was one of the first California State Energy Commission (CEC) model High Performance (CHPS) Schools in the state. It was designed to maximize natural daylighting, with a calculated overall building energy performance of 20-25% better than Title 24 Energy Code Standards. In the early design development, photovoltaics were planned for the roof; however, budget constaints for the technology, combined with longer payback periods in 2001, did not allow for the solar installation at the time. The District has been waiting for this opportunity to consider installation of newer renewable technology with current economic incentives.

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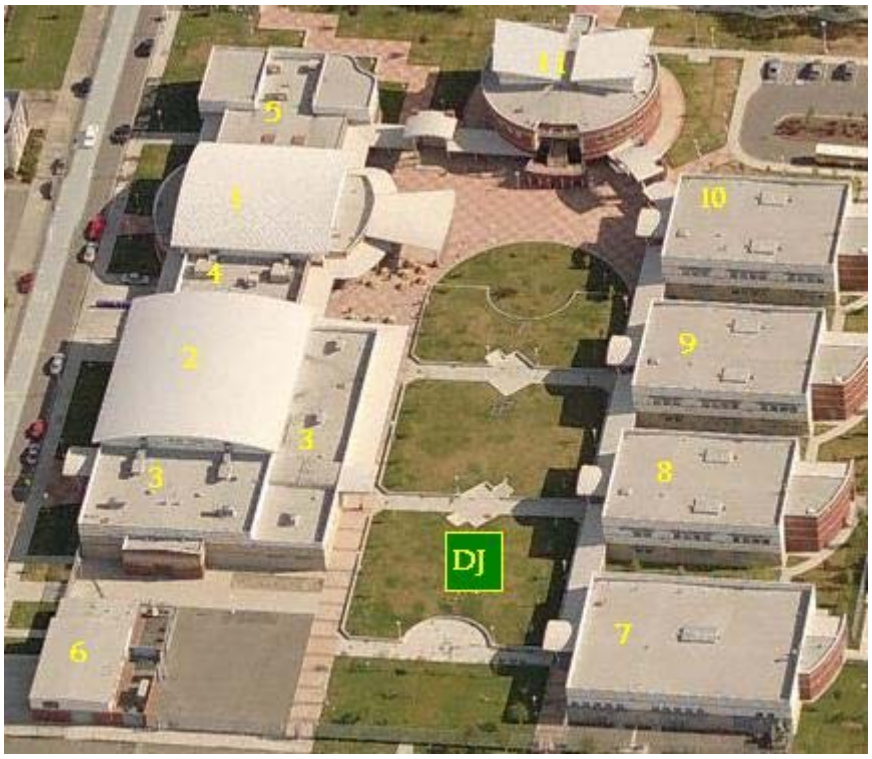
COMPARISON OF AERIAL IMAGING WITH ONSITE PHYSICAL ANALYSIS FOR SOLAR PV ASSESSMENT



DeJean Elementary School Complex Richmond California
Oblique Image courtesy of *Pictometry*

Summary

Case study (2009) compare the accuracy of estimating solar PV potential using advanced imaging algorithms against a physical on site measurement. The project examined 11 building units of various geometries for a school complex in California. **Results indicated that aerial imaging methodology is within 2 percent accuracy when compared with on site inspection**.

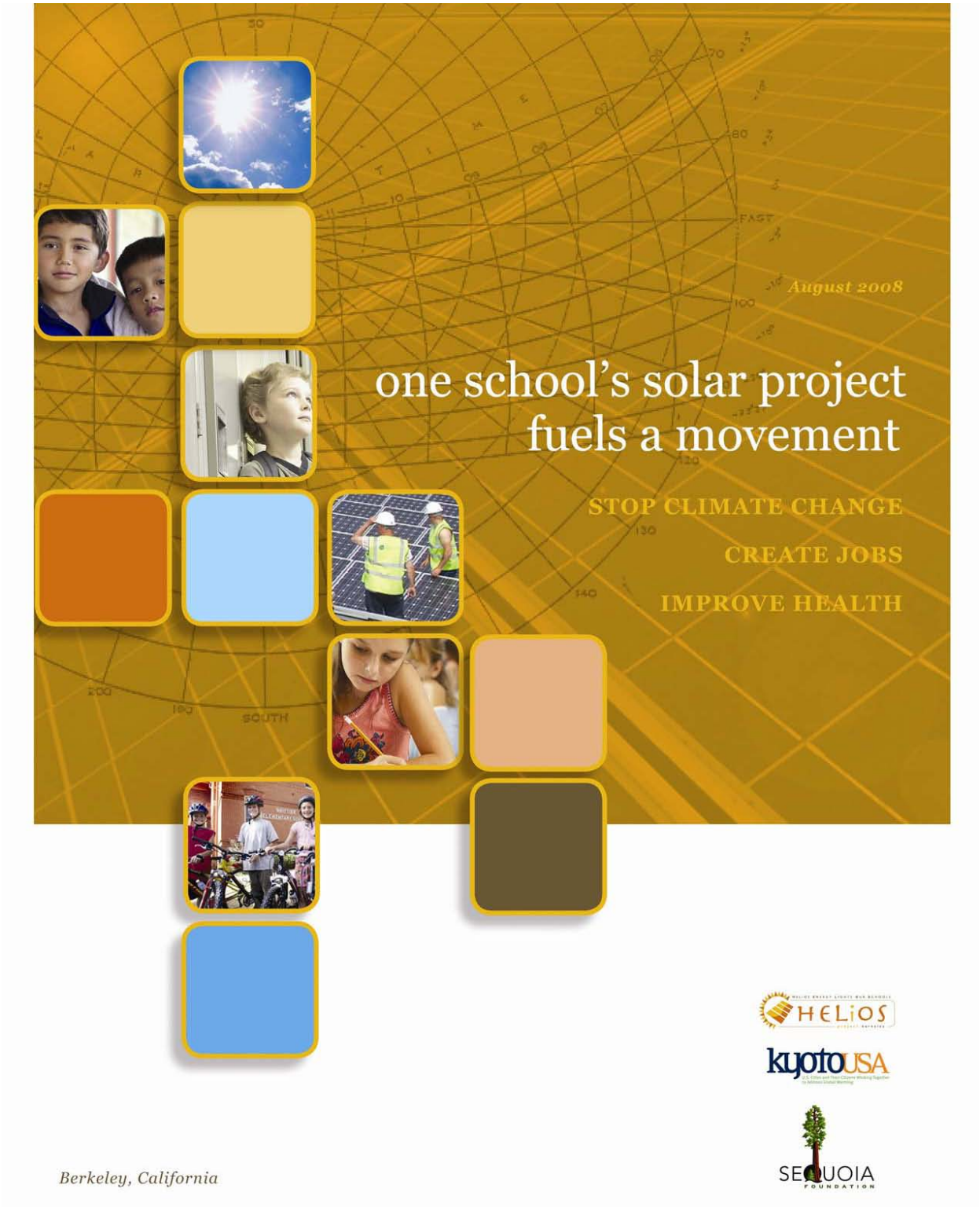
Methodology

Physical Onsite Inspection

Source: Inspection team of 4 individuals conducting visual inspection and roof blueprints

Process: Examine each building structure using line of sight measurements. Calculate location of roof sub areas not usable for solar panel installation. Convert measurements into a drawing using CAD/CAM. Allocate solar panels across roof surface drawings.

Time: 1/2 day on site inspection, 2 days for calculations, 2 weeks elapsed time.



This study makes the case for installing photovoltaic systems on our public schools and for developing a Community Climate Fund in Berkeley – and in your community – that can help to overcome the financial barriers preventing our schools from moving away from their reliance on electricity produced by costly and polluting fossil fuels. The model described here will work for any public or private (non-profit) school. It can set a School District on a path toward energy independence that will eventually eliminate a District's cost for much of the electricity derived from fossil-fuels—a cost that consumes a significant (and growing) part of a District's general fund.

You can download the entire study at www.heliosproject.net
Helios Energy Lights Our Schools (HELiOS)