

U.S. Department of Housing and Urban Development Workshop

Weatherization & Low Income Solar Retrofits Initiatives

June 17, 2009



Agenda

- Akeena Solar
- Andalay AC Solar Panel
- CSD \$10m Pilot Project
- Case study – Habitat for Humanity
- Overview of Other Low Income Solar Programs



Akeena Solar is a national installer and distributor

History:

Established in 2001

Competitive Advantage:

Patented Andalay panels optimized for high efficiency superior looks, simplified installation and outstanding reliability. #4 residential market share in California

Operations:

7 Offices in California

Customers:

Installation projects and panel sales in CA, CO, CT, DE, HI, NJ, NY, PA and WA

Experience:

Largest residential installer (CSI data for completed projects for past 12 months)
Approximately 4,000 systems installed to date

Strategic Partnerships:

Suntech, Kyocera
Enphase (leading microinverter manufacturer)
Morgan Stanley Solar Solutions, SunRun

Andalay AC: Fully Integrated Plug & Play AC Solar Power System

Simply Mount, Attach, Connect and You're Done

1. Racking built into panel frame eliminates bulky, rack system
2. Splices between panels provides structural rigidity
3. Splices provide electrical grounding path between panels (UL and NEC requirement)
4. Integrated micro-inverter eliminates the need for a central inverter, reduces complex and dangerous wiring, and improves panel performance



Andalay AC: Simplified Installation Process & Inventory Management with 80% Fewer Parts

Ordinary Solar



VS

Andalay AC Solar



Andalay Solar Panel Recognition

2008 International Design Excellence Awards (IDEA) Finalist Award

- A committee of 20 world-renowned designers and design thinkers reviewed more than 1,500 entries from 27 countries and honored the Andalay solar panels in the eco-design category of the competition



2008 TecHome Builder Magazine Innovative Home Technology Award

- The Andalay solar panel won the Innovative Home Technology Award in the Alternative Energy category from TecHome Builder Magazine



2008 Pacific Coast Builders Cool Product Award Winner

- More than 675 homebuilding professionals singled out the sleek, high-performance solar panel from about 125 green product submissions. Andalay won the 2008 Cool Product in the Green Category.



2009 GREEN LOG Award for Innovations in Renewable Energy Solutions

- The GREEN LOG Home Awards™ program was created to locate & spotlight innovative green building solutions. The Andalay AC solar panel won the Renewable Energy Solutions category



2009 SEIA Innovator award

- Andalay AC was recognized as an Innovation in PV Technology by the national trade association of the solar energy industry – Solar Energy Industry Association (SEIA)



Solar for All California

Program Overview

- California Department of Community Services and Development (CSD) has reserved \$10 million of its 2009 Low Income Home Energy Assistance Program (LIHEAP) block grant to launch *Solar For All California*.

Objectives of Solar for All

- Further reduce the energy consumption of each home through the LIHEAP weatherization program.
- Optimally-sized PV systems totaling 1.5 MW or more: Install 3-4 kW systems on 500 single-family homes, or equivalent systems for multi-family dwellings.
- No loans, no liens and no out-of-pocket costs for the home owner: The partnership fully subsidizes the installation, including warranty.
- Green job development: Train low-income workers to become solar installers.

Winners will be announced by July 2, 2009



Solar for All California

Public / Private Partnerships

- Public / Private partnership to install solar on LIHEAP-eligible homes comprised of:
 - community partners,
 - solar goods providers,
 - job development programs,
 - Financiers, and
 - utility
- Led by a current LIHEAP provider who possesses the leadership, organizational and technical capacity for:
 - client outreach and education,
 - dwelling assessments,
 - solar and electrical installations, and
 - related contracting, supported by CSD's LIHEAP funding



Case Study: Habitat for Heroes Solar Installation

- The new 27 home development is a project of Habitat for Humanity of Orange County that offers low-income housing to veterans and low income families.
- The first project of an innovative public/private partnership between:
 - California Department of Community Services and Development (CSD)
 - MS Solar Solutions Corp, a subsidiary of Morgan Stanley's Commodities group.
 - Akeena Solar
 - Habitat for Humanity
- The solar installations were completed by:
 - Community Action Partnership of Orange County (CAPOC) who provide local weatherization services funded through LIHEAP for Orange County
 - Orange County Conservation Corps who has a construction training program that teaches construction skills and provides on-site work experience by completing housing projects



Habitat for Heroes Solar Installation Case Study

- Akeena provided training and oversaw installation for the first four installations
- Trainings comprised of a one day classroom setting and on the job training.
- Trainees generally worked or were affiliated with CAPOC.
- Trainees ranged from:
 - Mostly experienced trades people (weatherization, roofers, electricians)
 - New trades people
 - No trades experience



In less than a day, the Habitat for Humanity volunteers installed four Andalay AC systems on two new duplex homes.



Solar Programs for Low Income Home Owners

- **MASH - The Multifamily Affordable Solar Housing**
 - Provides solar incentives on qualifying affordable housing multifamily dwellings. Provides two rebate tracks:
 - **Track 1A:** PV System Offsetting Common Area Load - \$3.30
 - **Track 1B:** PV System Offsetting Tenant Load - \$4.00
 - **Track 2:** offers higher incentives to applicants who provide quantifiable "direct tenant benefits" (i.e. any operating costs savings from solar that are shared with their tenants)
- **SASH - Single-family Affordable Solar Homes**
 - the SASH Program provides eligible homeowners with a higher incentive than the General Market California Solar Initiative (CSI) Program
- **NSHP – New Solar Homes Partnership**
 - Targets new residential construction, both single family and multi-family, including affordable housing. Affordable housing has an expected rebate of \$3.50/watt for individual residential units and approximately \$3.30/watt for systems on common areas
- **GoSolarSF for low income residents**
 - Offers incentives ranging from \$2,000 to \$4,000 for residents and up to \$10,000 for businesses. Low-income residents can qualify for an additional \$7,000



Thank you

Q & A

