

Improving Solar Projects Through Collaboration



US Environmental Protection Agency
Green Power Partnership

August 4, 2010



Agenda

2:00pm ET	Welcome & Introductions
2:05pm	Project Overview
2:20pm	Regional Initiative
2:40pm	Collaborative Effort
3:00pm	Agency Perspective
3:15pm	Questions



Speakers



Blaine Collison

Program Director, US EPA's Green Power Partnership



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Webinar Goals

Review a successful case study in collaborative solar procurement that can be used as a model

- By leveraging the contractual resource investment of the lead agency and creating a strategically bundled procurement pool, all are benefiting by reducing or eliminating the technical, financial, and organizational challenges of adopting renewable power.

During this Webinar, participants will learn:

- How nine independent municipal agencies were able to combine efforts in a joint procurement for 14 MW of new solar photovoltaic installations
- What role each project participant played and how that contributed to the overall project performance
- What pitfalls were avoided, challenges were addressed and successes achieved
- How to approach a similar project in their own areas and leverage this effort



Silicon Valley Solar Project Overview

- Complex procurement effort for **70 sites**
- Collaboration across **9 jurisdictions**
- Multiple Site Types:
 - Carports
 - Rooftops
 - Ground mounted



Largest collaborative multi-site project in the USA



Regional Goals & Project Initiation

- Launched by Joint Venture's Public Sector Climate Task Force
 - Formed in 2007
 - Local government partners from cities, counties, and other agencies
- **Charter Statement:**

To develop effective, collaborative, solutions for the reduction of greenhouse gas emissions from public agency operations, by providing a neutral forum for city and county government agencies and special districts to learn from each other and from others about climate protection programs.



Challenges & Opportunities

- Challenges

- High upfront costs associated with purchase and installation
- Need to minimize transaction costs
- Lack of understanding of financing options and available incentives

- Opportunities

- Collaborative effort to conserve funds, staff time
- Standardized procurement documents and Power Purchase Agreement (PPA)
- Accelerate financing process and deployment
- Serve as a model for similar efforts across the USA



Regional Benefits

- Conserve capital, minimize upfront costs.
- Reduce GHG emissions from local government operations.
- Reduce dependence on fossil fuels.
- Reliable cost of electricity over ~20 year term.
- Leverage reduced costs through bulk purchasing (5-20%).
- Provide access to technical expertise.
- Shared resources / knowledge base across the Valley, minimize redundant expense and resources.
- Use of local technologies, resources, businesses.
- Support / stimulate local clean tech jobs.
- Large number of installations in the greater Silicon Valley.



Environmental Impact

PHASE 1

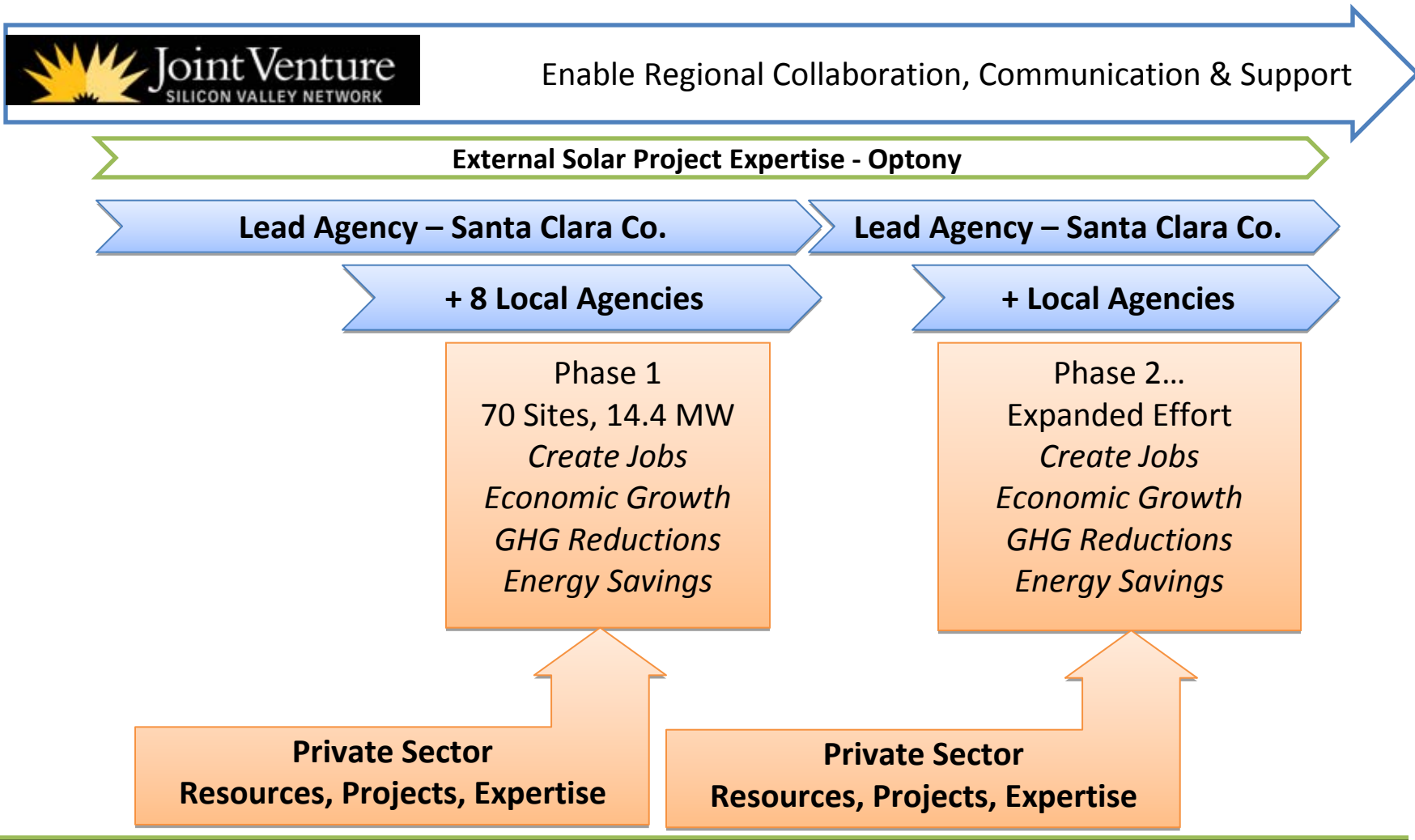
- Projects expected to break ground in 2010 and be completed by 2011
- Environmental equivalent of planting 2,800 acres of trees
- Will produce enough power for 2,700 California homes
- Increase in per-capita installed solar by 8W per person in Santa Clara County
- Electricity consumption completely offset for 10+ locations
- Projected to generate \$70M+ in local economic activity and 300+ jobs

PHASE 2

- Begin in late 2010
- Extend environmental and economic benefits across more sites and agencies



Silicon Valley Regional Collaboration Model



Strategic Bundling Approach

- Thorough review of individual site characteristics
 - Look for potential sizing issues and opportunities
- Consider site-specific and agency-level constraints
 - Energy usage, incentive structures, jurisdictional requirements
- Bundling sites by installation type, host facility, size
 - Make bundles attractive to qualified integrators
- Incorporate solar market input
 - Capabilities, economies of scale
- Consider total size (MW) and number of sites per bundle
 - Some bundles can be too small or too large



Site Bundle Descriptions

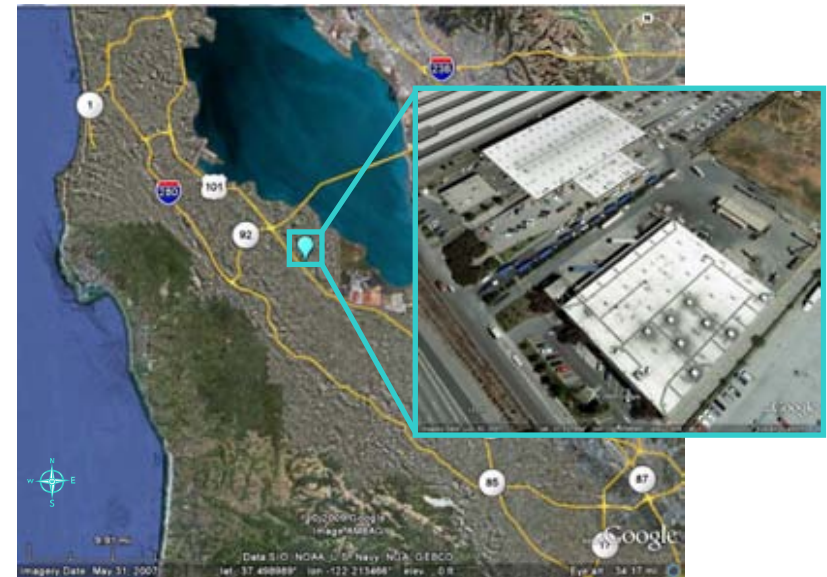
TABLE OF RPG SYSTEM BUNDLES	
RPG System Bundle Type	Description/Characteristics
Bundle 1 - Large systems	This bundle includes rooftop and ground mounted PV systems with a capacity to generate 650kW or more power at a single site.
Bundle 2 – Medium size systems	This bundle includes rooftop and ground mounted PV systems with a capacity to generate between 160 kW and 650kW at a single site.
Bundle 3 – Small size combined systems	This bundle includes rooftop and ground mounted PV systems with a capacity to generate upto 160 kW at a single site.
Bundle 4 – Small size rooftop only systems	This bundle includes exclusively rooftop mounted PV systems with a capacity to generate upto 220 kW at a single site.
Bundle 5 – Other systems	This bundle includes solar thermal PV, Fuel cell, and micro-wind turbine systems of various capacities yet to be determined based on the type of application.



EXAMPLE SITES



VTA Bus Depot



SBWMA Shoreway
Environmental Center



Valley Transit Authority – Bus Depot



SITE: Bus Depot
TYPE: Bus Canopy
SIZE: 1,100 kW

Estimated to provide
>100% of onsite
power needed



South Bayside Waste Management Agency



SITE: Shoreway Environmental Center

TYPE: Roof, Standing Metal Seam

SIZE: 187 kW



Agency Collaborative Working Structure

- How it was structured
 - Initial expression of interests with site information from various agencies
 - Formal letter of cooperation (MOU) between partners committed to process
 - Final site assessments provided, vetted and added to comprehensive RFP
 - All sites bundled and bid out together – however final contracts at each agency
- Lessons learned
 - Proactive engagement with legal, public works and city managers very important
 - Ongoing communication via enabling organizations keeps all parties aligned
- County of Santa Clara perspective
 - Providing leadership across County and region
 - Volume discounts and better competition
 - Increased economic activity within and around the County
- Other agency perspective
 - Could not easily or cost-effectively pursue this project without collaboration
 - Much better outcome and can leverage regional expertise



Agency Collaborative Procurement Benefits

- Administrative time and costs reduced
 - Lead agency incurs planned costs, but other participants have minor effort
- Process standardization
 - All parties move together at same time in the same way with same documents
- Project success factors
 - Solar project best practices deployed for all sites and agencies
- Market interest and competition
 - Better competition by qualified vendors = better pricing and outcome
- Volume pricing
 - Properly grouped sites drives economies of scale for vendors and better pricing



Lessons Learned

- Strategic bundling model has been validated by bid responses
- Had to move very quickly to capture CA solar rebates
- Demonstrating proactive regional leadership and model for future projects
- Both large national players and smaller regional integrators involved
- Need proactive outreach to market
- Ongoing project management and outreach to all participating organizations needed
- Alternative financing mechanisms could be considered
- Changes in policy, rebates and incentives have large impact on process
- Phase 2 participants already beginning to line up



Broad Application of Lessons

- Adoption of Best Practices in Creation of Model Documents
 - Learning from other public agencies + due diligence with industry leaders to ensure agreements would be attractive to both the participants and the vendors
- Strategic Bundling of Sites
 - Leverage economies of scale while optimizing for the strengths of the vendors
- Communication Strategy
 - Mixing regular updates at regional meetings with participant-focused special purpose meetings and conference calls, and one-on-one communications
- Vendor Outreach
 - Maximize vendor knowledge of RFP release through outreach partners: DOE, EPA, NREL, local industry consortium
- Could create “virtual buying group” with or without formal MOU between parties



Getting Started

- Leverage local or regional enabling organization
- Create inventory of sites and interested agencies and organizations
- Define goals, constraints and success factors
- Identify regional or national examples of similar projects
- Engage with regional or national solar industry players
- Utilize independent experts to refine plan, provide assessments and procurement
- Bring parties together to discuss important success factors and educate



Special Thanks For Their Leadership & Support

Caroline Judy, County of Alameda

Chris Schroeder, City of Milpitas

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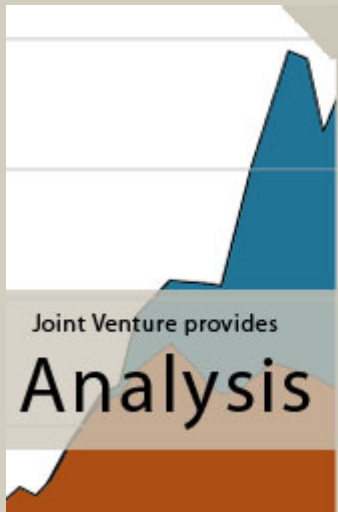
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Questions



Established in 1993, Joint Venture: Silicon Valley Network provides analysis and action on issues affecting our region's economy and quality of life. The organization brings together established and emerging leaders - from business, government, academia, labor and the broader community - to spotlight issues and work toward innovative solutions.



www.jointventure.org

www.jointventure.org/renewableenergyprocurement



Optony creates value for government and commercial organizations in the USA and China by developing and deploying solar best practices across the entire solar project lifecycle.

www.optony.com

