US Environmental Protection Agency
Green Power Partnership

August 4, 2010
## Agenda

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<td>2:00pm ET</td>
<td>Welcome &amp; Introductions</td>
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<td>Project Overview</td>
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<td>Regional Initiative</td>
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Speakers

Blaine Collison
Program Director, US EPA’s Green Power Partnership

Rachel Massaro
Associate Director of Climate Initiatives, Joint Venture: Silicon Valley Network

Ben Foster
Vice President, Operations, Optony Inc.

Siva Darbhamulla
Chief of Design Services, County of Santa Clara, CA
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
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
Enable Regional Collaboration, Communication & Support

Silicon Valley Regional Collaboration Model

External Solar Project Expertise - Optony

Lead Agency – Santa Clara Co.

+ 8 Local Agencies

Phase 1
70 Sites, 14.4 MW
Create Jobs
Economic Growth
GHG Reductions
Energy Savings

Private Sector
Resources, Projects, Expertise

Phase 2...
Expanded Effort
Create Jobs
Economic Growth
GHG Reductions
Energy Savings

Lead Agency – Santa Clara Co.

+ Local Agencies

Private Sector
Resources, Projects, Expertise

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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>
<thead>
<tr>
<th>RPG System Bundle Type</th>
<th>Description/Characteristics</th>
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<tbody>
<tr>
<td>Bundle 1 - Large systems</td>
<td>This bundle includes rooftop and ground mounted PV systems with a capacity to generate 650kW or more power at a single site.</td>
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<tr>
<td>Bundle 2 – Medium size systems</td>
<td>This bundle includes rooftop and ground mounted PV systems with a capacity to generate between 160 kW and 650kW at a single site.</td>
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<tr>
<td>Bundle 3 – Small size combined systems</td>
<td>This bundle includes rooftop and ground mounted PV systems with a capacity to generate upto 160 kW at a single site.</td>
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<tr>
<td>Bundle 4 – Small size rooftop only systems</td>
<td>This bundle includes exclusively rooftop mounted PV systems with a capacity to generate upto 220 kW at a single site.</td>
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<tr>
<td>Bundle 5 – Other systems</td>
<td>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.</td>
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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 the 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

For more information about this topic, contact:
Rachel Massaro  massaro@jointventure.org
Ben Foster  ben.foster@optony.com
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