

Scaling Up Solar Through Regional Collaboration



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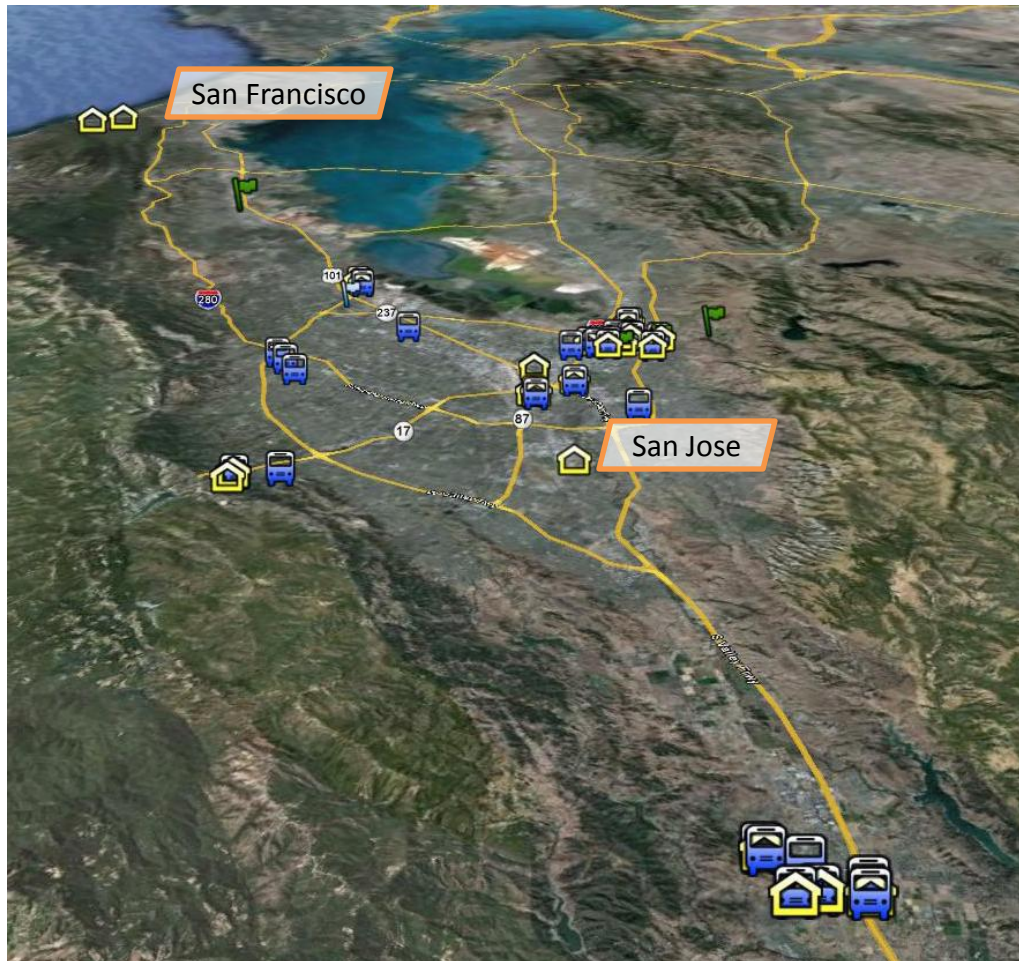
Regional Goals & Project Initiation



- Launched by Joint Venture's Public Sector Climate Task Force
 - Formed in 2007, started effort in 2009
 - Local government partners from cities, counties, and other agencies
 - Lead Agency – County of Santa Clara
- **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.

Silicon Valley Regional Solar Project Overview



- Includes **70 sites** in Phase 1
- Collaboration across **9 jurisdictions**
- **14.4MW** of combined solar PV
- Multiple Site Types:
 - Carports
 - Rooftops
 - Ground mounted
- Largest multi-agency effort to date
 - County of Santa Clara
 - City of Milpitas
 - City of Morgan Hill
 - Town of Los Gatos
 - City of Mountain View
 - City of Pacifica
 - City of Cupertino
 - VTA
 - SBWMA

Challenges & Opportunities

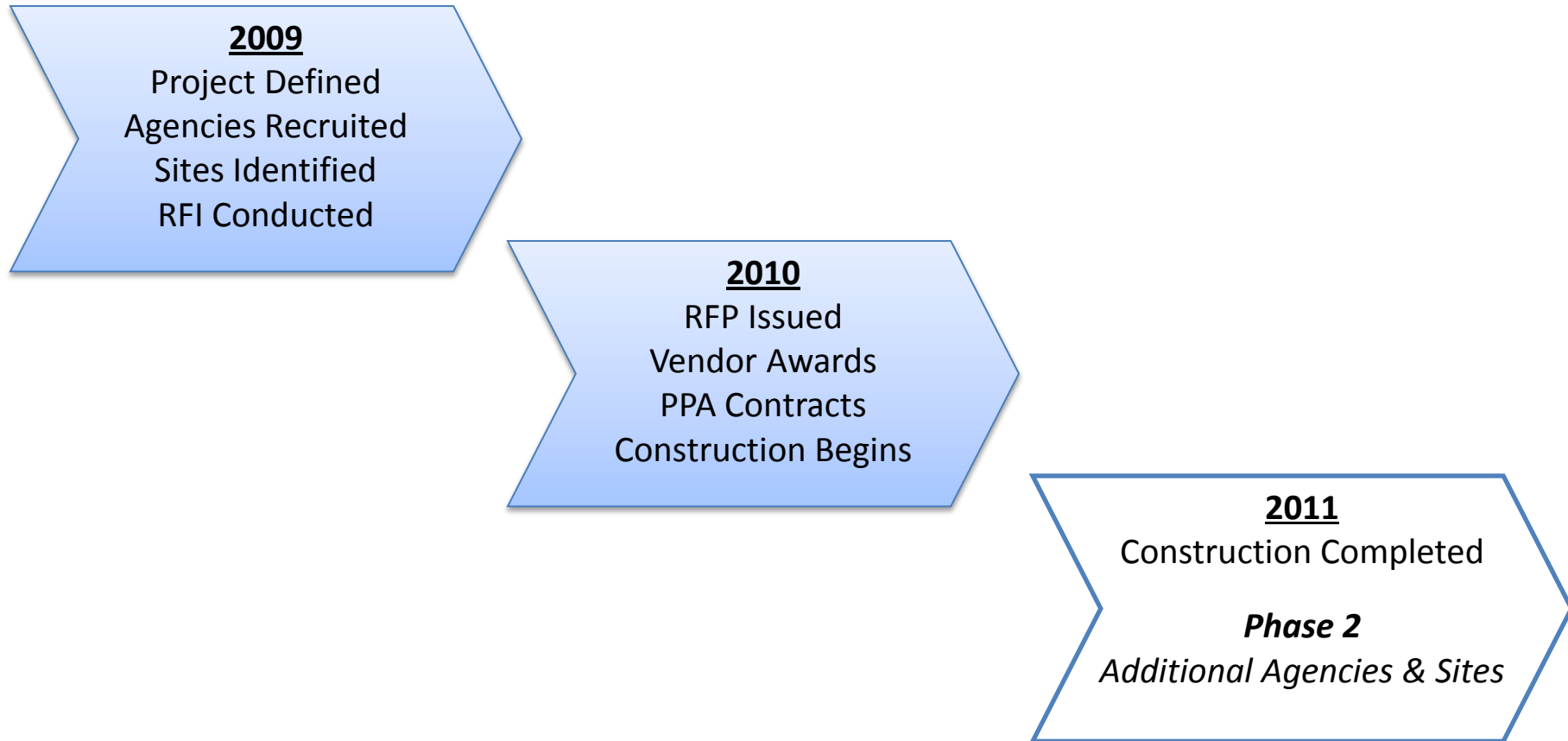
○ Challenges

- High upfront costs associated with purchase and installation
- Need to minimize transaction costs and admin effort
- Lack of understanding of financing options and available incentives
- Reach GHG reduction goals and meet state mandates

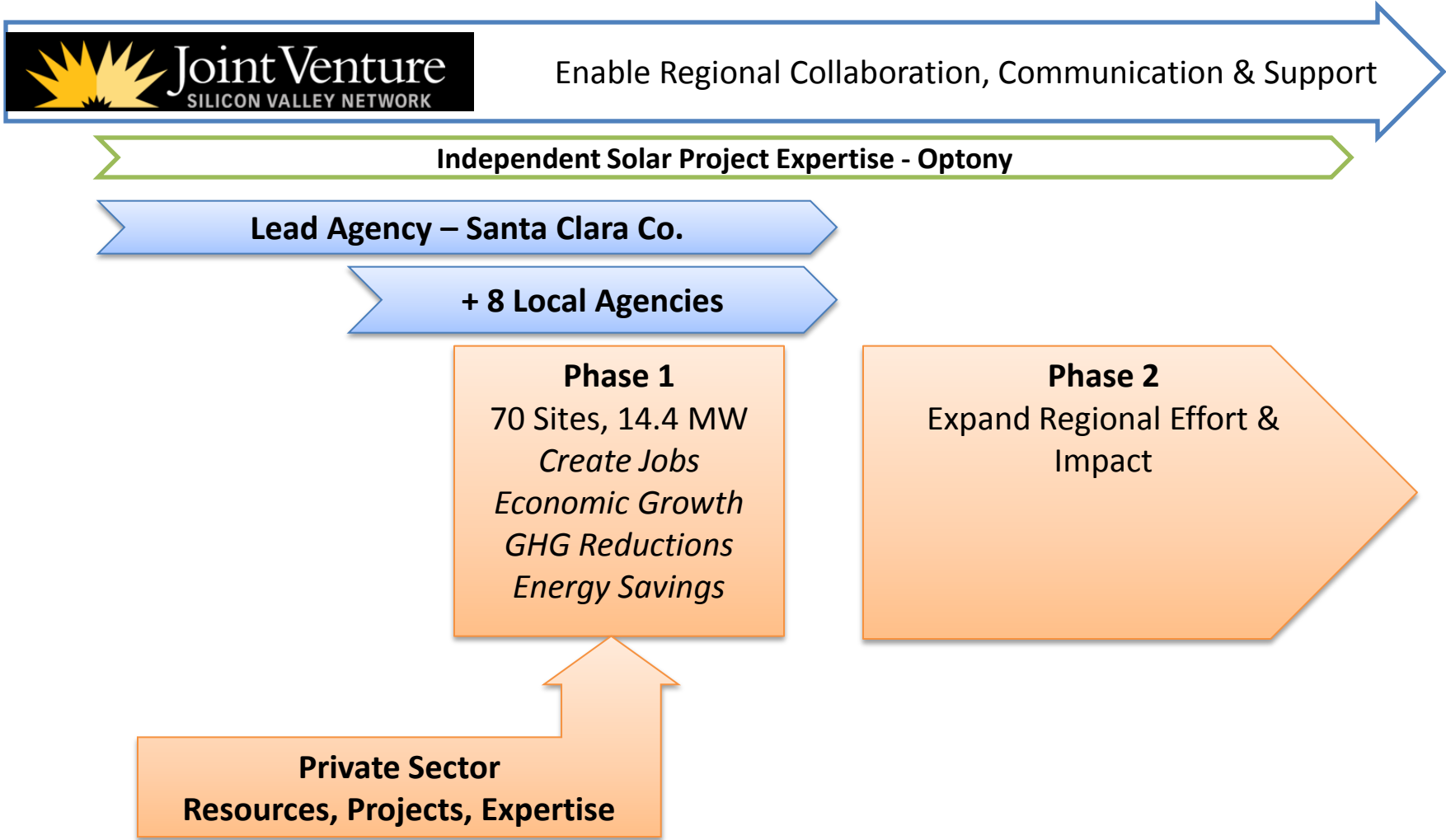
○ Opportunities

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

Project Timeline



Silicon Valley Regional Collaboration Model



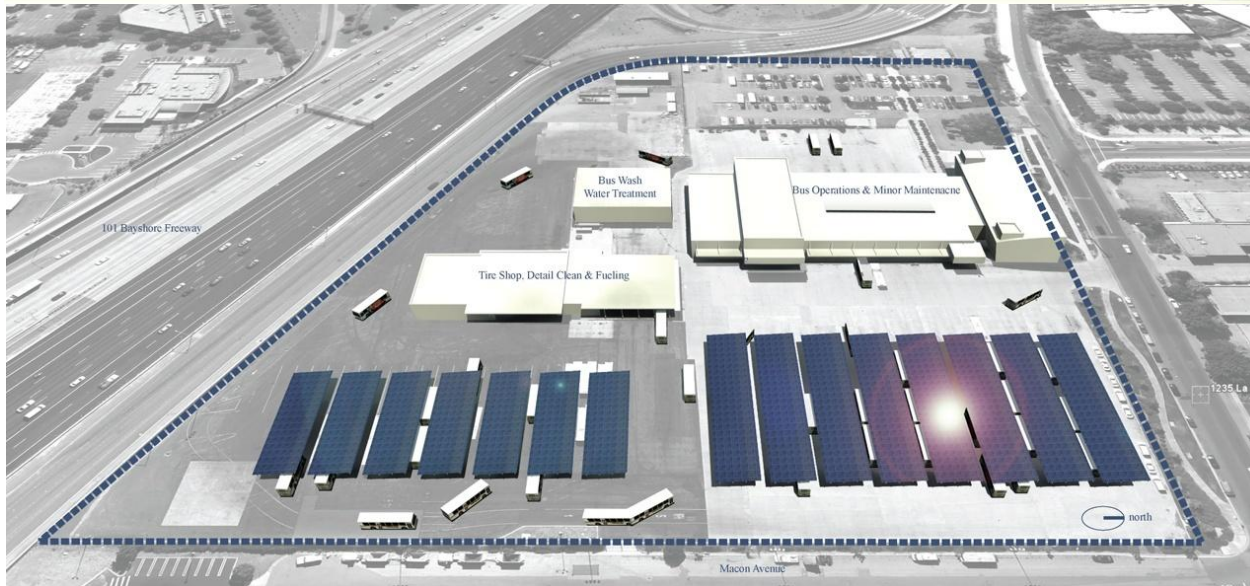
Strategic Bundling Approach

- 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, other attributes
 - Make bundles attractive to qualified integrators
- Incorporate solar market input
 - Capabilities, economies of scale
 - Avoid deal-breakers found in many other projects
- Consider total size (MW) and number of sites per bundle
 - Some bundles can be too small or too large
 - Evaluate other non-PV options

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.

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



Regional & REC Pricing Benefits

- Reliable cost of electricity over 20 year term
- Volume & competitive pricing yielded 10-14% cost reductions
- Electricity consumption completely offset for 25% of sites
- Projected to generate \$70M+ in local economic activity and 300+ jobs
- Over \$30M in Federal tax benefits captured via PPA (ITC + Depreciation)
- Demonstrated leadership with large number of installations
- Capture long-term REC benefits with future potential for resale
- REC pricing for 20 years \$0.015/kwh to \$0.025/kwh

Broad Application of Lessons Learned

○ **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
- Process standardization saves time and costs for all participants and stakeholders
- Frequent communication to project participants at regional and special purpose meetings

○ **Strategic Bundling of Sites**

- Leverage economies of scale while optimizing for the strengths of potential vendors
- Better competition by qualified vendors = better pricing and outcome

○ **Vendor Outreach**

- Maximize vendor knowledge of RFP release through outreach partners: DOE, EPA, NREL, local industry consortium
- Encourage vendors and provide timely feedback and relevant project information

Questions





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

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