Linking San Jose's Green Vision and Solar Cities

Market Transformation

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Overview

Timeline

- 07.01.08
- 06.30.10
- 95%

Budget

Total project funding

- $200,000 (DOE Share)
- $263,464 (Recipient Share)

Funding received in FY08-09

- $22,870

Funding received to date FY09-10

- $94,861

"This presentation does not contain any proprietary, confidential, or otherwise restricted information"

Barriers

- Upfront cost barriers
- Need for streamline processes/permitting fees
- Regulatory and legal barriers
- Need for trained workforce

Partners

- Principal Investigator – Mary Tucker
- Program Coordinator – Jessie Denver
- Interaction/Collaboration – City of San Jose, PG&E, CEC, SolarTech

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Relevance

Objective:

Develop and pilot local and regional financing, incentive and regulatory strategies to ensure all elements of community have opportunities to install solar technologies

- Increase Regional Financing Opportunities
- Increase solar installations
- Address permitting processes and fees on a regional level

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Approach

- Regional approach to reduce permitting and inspection process times
- Integration and leverage with multiple funding resources
- Create demand for clean tech services and generate workforce opportunities.
- Enables community participation across five of 10 Green Vision goals

CaliforniaFIRST PACE Program: First statewide program in the country

- Eliminates upfront cost barrier for EE and RE improvements
- Loan repayment through property tax bill; 20 years
- Debt stays with property, not individual owner
- Participation not based on personal credit

- Renewable Energy Permitting Symposiums (2008 & 2009)
- City & County building code & permitting officials training provided by UL (2010-2011)

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Approach

Permitting/Inspection:

Reorganize City process to respond to customer's needs by developing a one-stop permit center

- Eliminate requirement for office plan checks of most SFH PV projects
- Develop several plan check service programs (all sectors)
- Reduce inspection request lead-time

Through best practices in permitting and inspections, San Jose has made installing solar easy for all sectors, which has contributed to the impressive rate of adoption in the City

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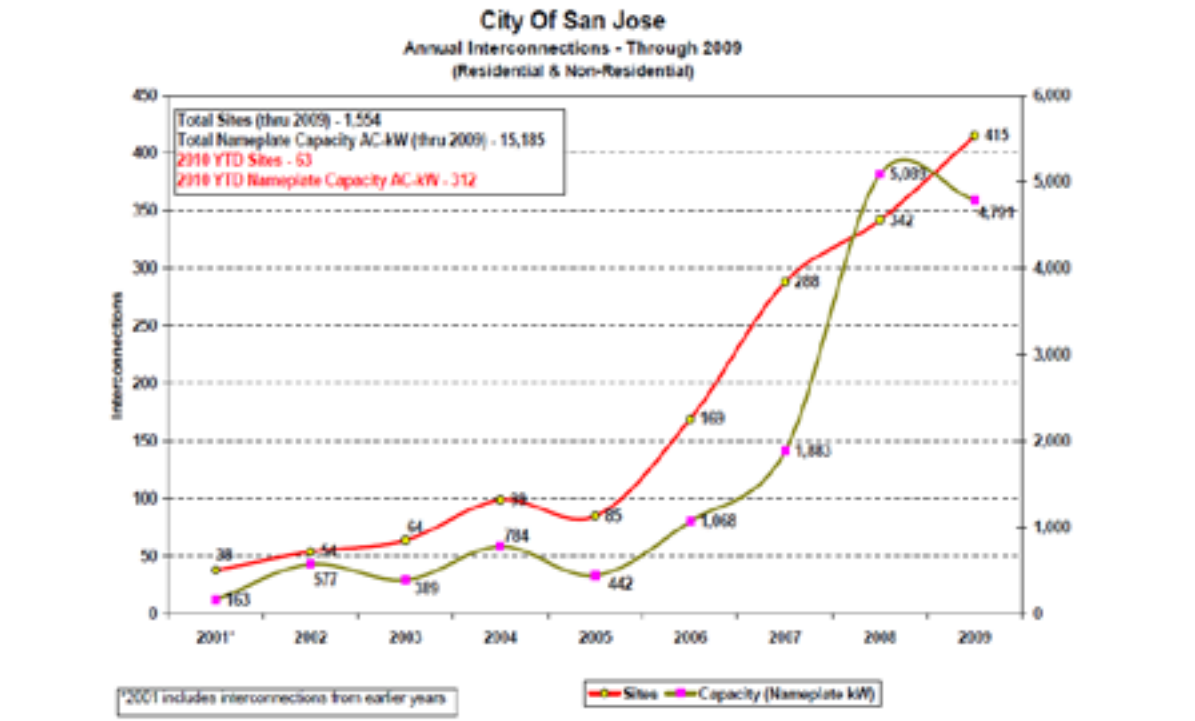
Accomplishments / Progress / Results

Permitting/ Inspection:

- 2001-February 2010:
  - 1,617 PV systems
  - 15.4 MW
  - More than any city in California
- 2009
  - 347 PV permits issued
  - Double 2008 (145)
- Online permits (SFH)
  - 2010

Annual Interconnections through February 2010



Pacific Gas and Electric Company.

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Collaborations

- **California Statewide Communities Development Authority (CSCDA)**
  - Joint Power Authority; 500 cities & county members
  - Developed CaliforniaFIRST program
- **Renewable Funding**
  - Program Administrator selected by CSCDA
  - Financial partner: Royal Bank of Canada
- **California Energy Commission**
  - State Energy Program grant administrator
- **Sacramento County**
  - Administrator of SEP award funds
- **Solar Energy Industries**
- **Regional Planning, Building and Permitting Agencies**

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Relevance

Objective:

Develop and implement a coordinated outreach and education strategy to ensure that the community has the tools, resources and workforce needed to increase the use of renewable energy.

Conduct public outreach through presentations, training workshops, online tools, summits and symposiums to multiple sectors including neighborhood groups, schoolteachers, industry representatives, building code officials and firefighters.

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Approach

San Jose is developing educational opportunities for multiple sectors of the community to eliminate the lack of awareness and information about the viability of solar, to increase resources for job training opportunities and to address training needs for code and public safety officials.

Ensure:

- Local schools have solar curriculum and tools
- Workforce development programs coordinated; instructors trained
- Building code and public safety officials trained
- Property owners have information on viability of solar

Goal: 50% increase in awareness and knowledge

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Accomplishments / Progress / Results

- PV and Fire Safety Training DVD
  - 500 municipalities across the country
  - All SAC (2009)
  - California Public Utilities Commission
- First PV and Fire Safety training held in San Jose (2009)
  - 80 firefighters; 19 jurisdictions
- Non Profit and Affordable Housing Energy Summit (2009)
- SolarTech Workforce Summit (2009)

PV & Fire Safety Training Workshop

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Accomplishments / Progress / Results

- Solar Schoolhouse training workshops (2009)
  - 80 teachers/12 school districts
  - Scholarships to teachers to attend week long solar training
  - Provide curricula and tools (PV cells, sun ovens) to schools
  - Interns to provide presentations in classrooms (2010-2011)

- Sponsor instructors from local colleges to attend DOE Train the Trainer workshop at FSEC
  - Students enrolled in solar training programs at local colleges offered volunteer internship opportunities with City to conduct site evaluations (2010-2011)

San Jose Unified School District
Photo: David Baer, IBEW

Solar Schoolhouse Project

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Accomplishments / Progress / Results

- Presentations to neighborhood and business associations
  - 3000 community members reached (2009)
- Developed 1st county wide solar map (2009-2010)
  - Integrate IMBY tool (2010)
  - Collaboration with City and PG&E
- Develop new Solar Program website (2009-2010)
  - Financial Calculator for various financing options (2010)

Alviso Library Community Solar Event

www.svenergymap.org

Collaborations

- City of San Jose – Silicon Valley Energy Watch Program
- San Jose Redevelopment Agency
- SolarTech
- California State Fire Marshall
- California Solar Energy Industries Association
- San Jose Unified School District
- Rahus Institute
- Center for Employment Training
- Community Colleges & Local Universities
- International Brotherhood of Electrical Workers (Union)
- Local Clean Tech companies
- Santa Clara University
- Pacific Gas and Electric

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Relevance

Objective:

Identify strategies, opportunities and challenges that must be surmounted for the City to achieve the Green Vision goal of 100% electricity from renewable sources

– Address legal issues associated with municipal PPA efforts

– Support/sponsor legislation to:
  - Expand net energy metering cap in California
  - Enable excess local government generation/financial credits to be allocated to designated benefiting accounts

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Approach

Legal Issues Associated with Municipal PPA Efforts

- Green Vision goal community wide, City to lead by example
- DOE Solar Showcase grant (2008)
- Unsuccessful Municipal Power Purchase Agreement
- Annual Appropriations Clause, Indemnification, RECs
- Public Works Department Overhead cost
- Council directs staff to develop plan to finance 50 MW (2009)

Work with DOE, NREL, City Staff and Solar Community to address issues

- Held Request for Information process to guide new RFP
- Heard from industry on best approach
- Re-release RFP (September 2009)

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Legal Issues Associated with Municipal PPA Efforts

Outcome of September 2009 RFP:

- 1.3 MW PPA with DRI-SunEdison at DOE Solar Showcase facility
- Provide 75-80% energy requirements
- Cost savings: $542,000 over 20 years
- Other terms: Annual Appropriations, RECs, Indemnification

Process enabled City to evaluate and develop solutions to internal PPA barriers & perceived industry risks

- 20MW RFP
- 38 City facilities and land/park (Summer 2010)

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Support State Legislation that Removes Barriers

Target efforts to support policy development that strengthens market and is in the best interest of residential, commercial and local government solar customers

Sponsor and/or Support Assembly Bills

- Aggregated Net Metering (AB2466)
- Net Energy Metering Cap (AB 520)
- Property Assessed Clean Energy (AB 811)
- Payment for excess generation (AB 920)
- Fund at State level for PACE programs (SB 77)
- Feed in Tariff

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Support State Legislation that Removes Barriers

AB 510 signed 2010; raised the requirement on net metering in California;

AB2466 signed into law 2008; implementation 2010

- City landfills, open space, parks

AB 920 signed into law 2009; implementation 2011

- Enables community compensation for excess generation

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Collaborations

U.S. DEPARTMENT OF ENERGY | Energy Efficiency & Renewable Energy

Legal Issues - PPA

- DOE, NREL, Sandia National Laboratory
- City of San Jose Attorney's Office, Finance Department, City Managers Office
- Clean Tech Industry

Legislation

- State Legislators
- California Public Utilities Commissions
- Local Utilities
- California Solar Energy Industries Association
- California Local Government Sustainable Energy Coalition
- Vote Solar

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Budget Status and Potential for Expansion

	DOE Allocation	City Cost Share	Final Projected Balance (June 30, 2010)
Personnel	$78,378	$60,560	$10,156.16
Fringe Benefits	$22,079	$24,225	($4,275.52)
Travel	$4,000	-	-
Supplies	$39,562	-	$37,892.71
Contractual	$40,000	-	$5,030.40
Total Direct	$184,019	$84,785	$48,803.75
Indirect	$15,981	$15,981	-
Totals	$200,000	$100,000	$48,803.76

- Delayed start date due to contract/hiring issues
- Requesting no cost extension
- Additional education and outreach will be used with budget (solar block parties, schoolhouse activities)

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Solar America City – Special Project 2010-2011
City of San Jose EECBG Activities

- Implementation of Clean Energy Financing Options (PACE, credit unions, group purchases)
- Evaluation of Qualified Energy Conservation Bond Financing for Revolving Solar Loan Fund
- On-Line Solar Permitting Process
- Solar Train the Trainer Internship Program
- Solar Career Training for At-Risk Youth
- Green Vision Education and Demonstration Center

- 20+ MW RFP for Solar PV on city facilities/lands/parks
- Solar Thermal at Fire Stations

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Mandatory Summary Slide

City of San Jose has identified and worked to remove barriers that impede market transformation. Significant activities focused on near and mid-term results implemented by the City include:

- Implemented streamlined permitting and inspection best practices
- Addressed legislative measures to expand market for solar technologies
- Informed all sectors of the community on various elements of solar technologies
- Development of multiple financing mechanisms (PACE, lease, PPA, loans)
- Development of workforce opportunities through coordinated efforts
- Incentivize local manufacturing and economic development

San Jose's approach to overcoming key barriers hindering widespread adoption of solar technologies is based on collaboration with internal and external stakeholders and has resulted in a 17% increase in installations and a 50% increase in awareness in the last year.

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