




## Local Clean Energy and Sustainability Initiatives: How to Leverage Public Dollars with Private Sector and Other Resources

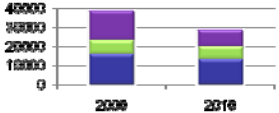



**Wednesday, June 15, 2011**  
**Liz Yager, Energy and Sustainability Manager, County of Sonoma**  
**And SCEIP Program Manager**

## Beginning of the Sonoma County Energy Trek

- 1998 Task Force – SP3 (Sustainable Policies and Practices Project)
- 2001 - Joined ICLEI
- 2002 – Made our first climate pledge and needed a plan
- 2004 - All Cities plus the County adopt aggressive GHG goals
- 2006 Climate Protection Action Plan – 20% ↓





**Goals And Measures**

## Collaboration and Partnerships

- Cities
- Agencies
- Non-profits
- Air Districts
- Other Counties
- County Departments and Divisions
- Sonoma County Water Agency (SCWA)
- Regional Climate Protection Authority (RCPA)
- Pacific Gas and Electric Company (PGE)
- Sonoma County Transportation Authority (SCTA)
- Local building and trade organizations
- Educational institutions
- State and Federal Agencies

**Non-Profit Organizations:**  
 Faith-based Organizations, Climate Protection Campaign  
 Occidental Arts and Ecology, Community Action Partnership  
 Leadership Institute for Ecology and the Economy  
 Solar Living Institute, Volunteer Center  
 Solar Sonoma, SMART Train

**Business and Workforce:**  
 TradeUnions, North Bay Labor Council,  
 North Coast Builders Exchange  
 Business Environmental Alliance  
 Sonoma County Alliance  
 North Bay Leadership Council  
 PGE

**State and Federal Agencies:**  
 Department of Energy  
 Housing and Urban Development  
 Health and Human Services  
 Department of Labor

**Local Agencies:**  
 Workforce Investment Board  
 Economic Development Board  
 Innovation Council  
 Energy & Sustainability

**Education:**  
 Sonoma State University  
 Santa Rosa Junior College  
 Sonoma County Office of Education  
 Emerging "Green and/or" Charter Schools  
 Build It Green

The list truly runs off the page....

## Strategies to Reach Climate Goals

- Department and Division Projects
- Transportation Sector
  - Employee commute program
  - Greening the County Fleet
- Comprehensive Energy Project (CEP)
  - Building Retrofits: Energy Efficiency, Water Conservation
  - Clean Energy Generation
- Special programs
  - Sonoma County Energy Watch
  - Sonoma County Energy Independence Program








## Commute Program Enhancement

**Expand or Revise Current Program:**

- Commute/Fleet Education, Promotion & Support
- Telework/Telecommuting
- Ride Matching Services
- Bike to Work
- County/City Bus Pass Program
- Preferred Parking for carpool
- Compressed Work Week (CWW)





**New Strategies:**

- Implement a "Bike While at Work" program
- Research Employee Commute Tracking System
- Guaranteed Ride Home

## Transportation Strategies

### Greening the Fleet

- Fleet hybridization & plug-in conversions
- Purchase of electric replacement vehicles





**EV Charging Station Partnership**

- County
- Water Agency
- City of Santa Rosa

### Fleet Development

- Started using hybrid vehicles in 2002
- Currently over 230 hybrid vehicles in the fleet
- Converted first Prius to a plug-in in 2008
- Currently have 9 plug-ins in the fleet
- First hybrid medium duty truck in 2010
- Electric Vehicles on the horizon

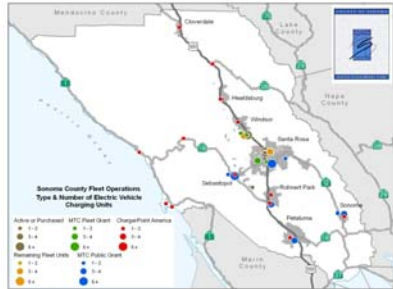


### Fuel Cost Comparison

Savings of over **71,000** gallons of gasoline (\$200,000) to date as a result of the hybrid program

Vehicle	Cost/Mile	Cost/100 Miles	Cost/5000 Miles
Compact Car	11¢	\$10.63	\$531.67
Hybrid (Prius)	7¢	\$7.09	\$354.44
Plug-in Hybrid Peak	6¢	\$5.71	\$285.61
Plug-in Hybrid Off Peak	5¢	\$5.36	\$268.11
Electric (Leaf) Peak	3.6¢	\$3.60	\$180.00
Electric (Leaf) Off Peak	1.9¢	\$1.92	\$96.00

### Investing in Infrastructure



Electric Vehicle Supply Equipment

- County: 15 active, 22 grant
- SCWA: 9 active, 5 grant
- City of Santa Rosa: 13 active, 5 grant
- MTC grant: 25 public use
- ChargePoint grant: up to 25 public use

### Comprehensive Energy Project

#### CEP Steps


- Sonoma County selection of an Energy Services Company
- Inventoried County Facilities
- Prepared Investment Grade Audit
- 101 Energy Efficiency Measures (EEM) evaluated
- The County obtained Private Loan Financing
- Contracted for services and started CEP implementation

### Financing Strategy

ESD has oversight for the \$5M utility budget of the County consolidating finance activities

**All projects must be cash neutral from Day 1**

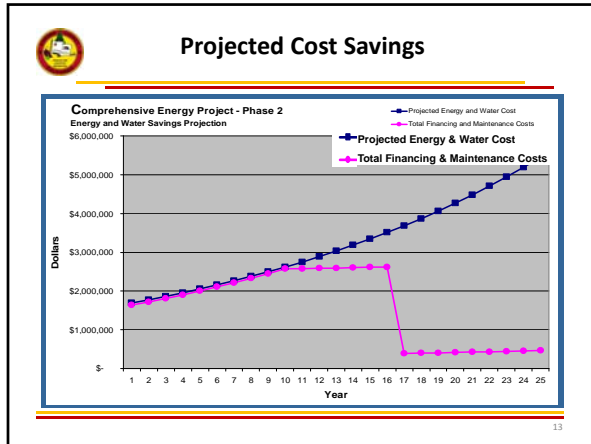
- Debt Service Loans
- Utility programs
- Grant Funding
- Goal of developing a revolving energy fund



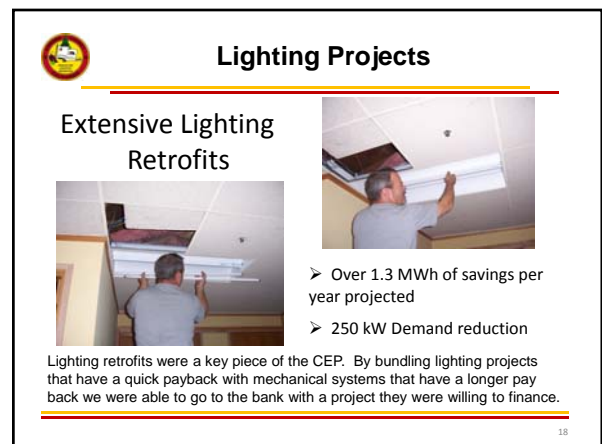
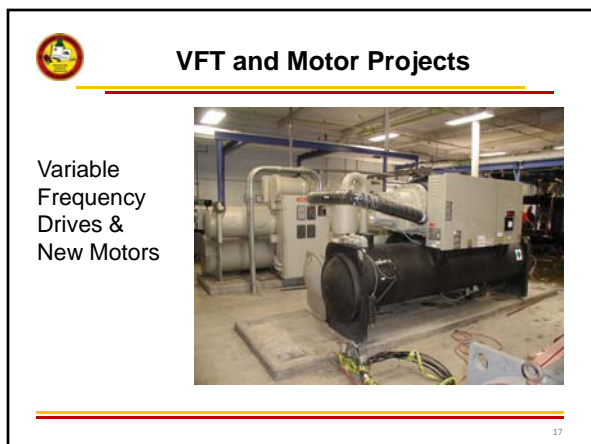
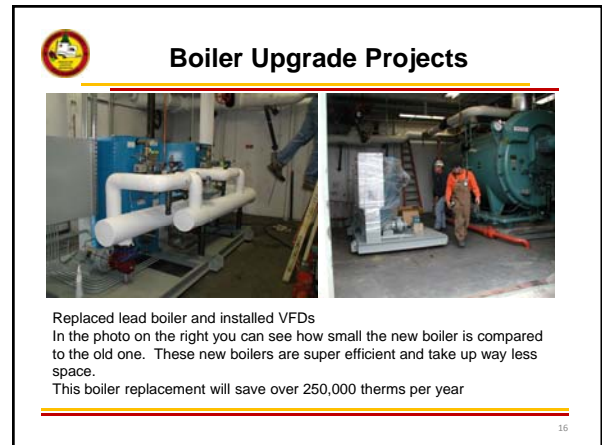
### Financing Plan

Project Cost	\$22,272,029
Incentives, Grants, and Rebates	(\$3,941,226)
Financed Amount	\$18,730,803
Estimated Interest Rate*	4.98%
Repayment Term	16 years
Assumed Closing/Funding Date	1/1/09
Assumed Annual Energy Cost Escalation*	5%
First year of positive cash flow	Year 12
Total payments	\$31,794,615
Total cumulative positive cash flow after 25 years (estimate life of equipment)	\$38,404,231

\* Rates are estimates and are subject to change. 5.4 was max rate




- ### Comprehensive Energy Project
- Summary of projects**
- 38 EEMs at 24 buildings
  - Lighting retrofits, 20 buildings
  - HVAC replace or rebuild in 4 buildings
  - MADF HVAC Motors & Controls
  - Central Mechanical Plant (CMP) upgrade
  - Water retrofit, including MADF and JJC
  - 1.4MW Fuel Cell Cogeneration Power Plant



### Water Efficiency Projects


Saving over:




- 19,000,000 gallons/yr
- 16,112 therms reduction/yr
- 13.8 kW demand reduction
- \$301,617 in energy savings

### 1.4 MW Fuel Cell Power Plant

- Generates 10,693,216 kWh/year
- Produces 45 billion BTUs year
- Produces virtually no pollutants
- Reduce GHG emissions by 69% versus grid power
- Designated "Ultra-Clean" by CARB



### 750 KW SOLAR ARRAY



The solar array at the Juvenile Justice Center includes roof mounted and ground mounted panels that provide 60% of the centers electric power. Taking the Los Guilicos facility to net zero is a County goal.

### Climate Protection Action Plan 2010 Results

20% GHG reduction goal met!

(Updated Baseline)	2000 Baseline (Tons)	2010 Reduction Target (Tons) 20% of Baseline + BAU Growth	Reduction to Date (Tons)	% of Target
Buildings	7,835	2,295	5,054	<b>220%</b>
Fleet	7,159	2,402	436	18%
Commute	15,787	3,157	3,635	115%
<b>Total</b>	<b>30,781</b>	<b>7,855</b>	<b>9,125</b>	<b>116%</b>


\* BAU = Business As Usual Growth

### Sonoma County Energy Watch

**Government, Non-profit and Small Business**

- Direct Install Services
- Incentives and Rebates
- Rebate Application Assistance
- Energy Efficiency Consulting
- Audits and Evaluations
- Retro-commissioning
- Demand Reduction
- Project Evaluation

**Results:**  
 SCEW has assisted over 150 Customers  
 Saving over 5,365,000 kWh per year, enough to power 330 homes  
 Saving over \$750,000 for clients  
 Reducing CO<sub>2</sub> by 1500 tons of per year




### Energy & Sustainability Into the Future

- Facilitate, track and report greenhouse gas reductions
- Support regional partners
- Thank you!



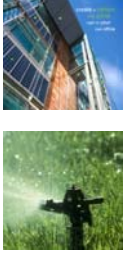
## Local Clean Energy and Sustainability Initiatives: How to Leverage Public Dollars with Private Sector and Other Resources

Sonoma County Energy Independence Program  
and  
Energy Upgrade California In Sonoma County  
Wednesday, June 15, 2011  
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And SCEIP Program Manager



## Leverage the Power of PACE

- SCEIP opened March 2009
- County wide, comprehensive program.
- Over 1,400 projects completed
- Over \$45 million disbursed for improvements!
- Over 85 eligible improvements
- One-stop-shop approach




Reduce and Produce

## Planning a Project

Interest


- Save Money
- Save Energy
- Go Green
- Live Comfortably

Research




Energy Analysis  
Water Audit

Evaluate Bids




ROI,  
Contractor,  
Projects

Prepare

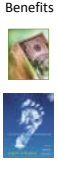


Lender  
Acknowledgement,  
Rebates,  
Financing  
options

Participate



Benefits

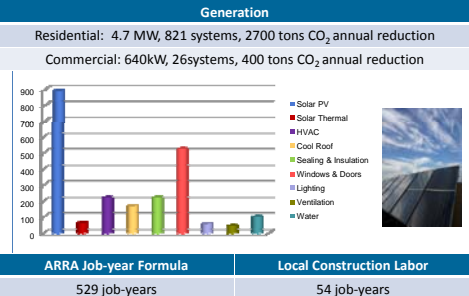


↓GHGs

## Projects and Jobs through SCEIP

**Generation**

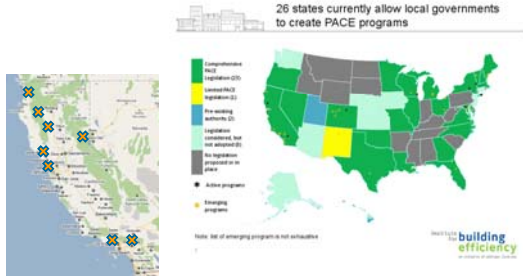
Residential: 4.7 MW, 821 systems, 2700 tons CO<sub>2</sub> annual reduction  
Commercial: 640kW, 26systems, 400 tons CO<sub>2</sub> annual reduction



ARRA Job-year Formula	Local Construction Labor
529 job-years	54 job-years

## More Programs Expansion on the Horizon

26 states currently allow local governments to create PACE programs



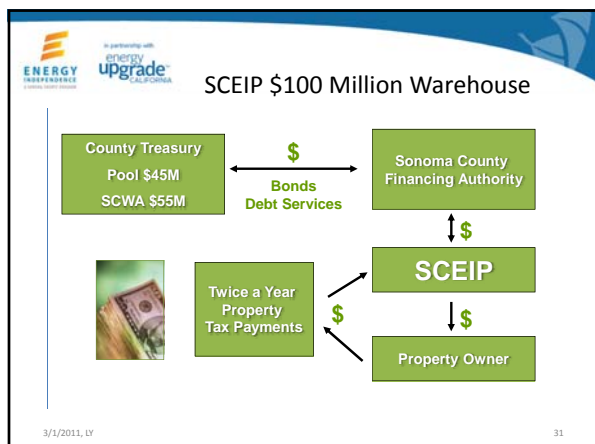
**Legend:**

- Comprehensive local legislation (CA)
- Local (M/C) legislation (IL)
- Pre-existing programs (AZ)
- Legislation considered, but not enacted (TX)
- No legislation proposed or active
- Active program
- Emerging program

Note: list of emerging programs not exhaustive

## To Build a Flourishing Program

- Public, Private, Education and Non-profit collaboration
- Community Goals
- Work with Stakeholders: Lenders, Partnering Agencies, Contractors, Local Utilities
- Plan for a Storefront and/or Web Site
- Tools and Applications
- Administrators, Staffing, Steering Committee, Legal Team, Financing Team
- Marketing, Education & Outreach!



3/1/2011, LY

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### Challenges / Opportunities

- Getting the message out
- Return on Investment
- Need more robust energy evaluation protocol for commercial properties
- Acceptance by banks and lenders
- Interest rate competition
- Long term financing options
- On-bill financing for renters

A collage of images including a stack of money, a document, a person working at a computer, and a document with a dollar sign, illustrating the financial and operational aspects of the program.

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### Benefits

- Saving energy and money
- Increasing health and comfort
- Decreasing emissions
- Developing the local economy and workforce
- Building new partnerships to leverage competencies, minimize duplication and decrease consumer confusion

Two images are included: one showing a modern building with large windows and another showing a close-up of solar panels on a roof.

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### Questions?

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Santa Rosa, California 95403  
FAX (707) 565-6474

SCEIP@sonoma-county.org

[www.sonomacountyenergy.org](http://www.sonomacountyenergy.org)  
[www.energyupgradeca.org](http://www.energyupgradeca.org)

**(707) 565-6470**

The logo features a stylized cloud with the text 'lower your carbon footprint by taking the next step' and 'energy efficiency evaluations' below it.

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