

RESOLUTION NO. 5790

RESOLUTION OF THE CITY COUNCIL OF THE CITY OF SEBASTOPOL ACCEPTING  
THE *SONOMA COUNTY SOLAR IMPLEMENTATION PLAN* PREPARED BY SOLAR  
SONOMA COUNTY

WHEREAS, the City of Sebastopol joined Solar Sonoma County in 2008 to support initiatives for more solar power and energy efficiency throughout Sonoma County; and

WHEREAS, being a member of Solar Sonoma County provides the City of Sebastopol the benefits of Solar Sonoma County's support with technical advice and assistance regarding solar installations and energy efficiency; and

WHEREAS, the *Sonoma County Solar Implementation Plan* was prepared by Solar Sonoma County under a U.S. Department of Energy Solar America Cities grant administered by the City of Santa Rosa; and

WHEREAS, the *Solar Implementation Plan* is a key tool for the Solar Sonoma County goal to increase the amount of solar power produced in the County by an additional 25 megawatts by 2011; and

WHEREAS, the *Solar Implementation Plan* provides regional strategies to reduce market barriers to the installation of solar energy systems and energy efficiency measures through advances in policy, financing, education, and market transformation; and

WHEREAS, the *Solar Implementation Plan* is a valuable resource that can help achieve the greenhouse gas reduction goals of the City of Sebastopol; and

WHEREAS, the *Solar Implementation Plan* offers several advantages to the City of Sebastopol, including the ability to efficiently coordinate with stakeholders; collaborate on the best practices for the use of regional resources; and avoid duplicate or competing efforts,

NOW, THEREFORE, BE IT RESOLVED that the Council of the City of Sebastopol accepts the *Solar Implementation Plan* prepared by Solar Sonoma County, and commits to work with all the other cities and the County in the Solar Sonoma County effort to implement solar power and energy efficiency efforts across our County and to work to become leaders of solar installations and energy efficiency throughout the nation.

PASSED, APPROVED AND ADOPTED this day 6<sup>th</sup> day of April, 2010, by the following vote:

AYES: Councilmembers Robinson, Shaffer, Kelley, Vice Mayor Wilson and Mayor Gurney


NOES: None

ABSTAIN: None

ABSENT: None

  
\_\_\_\_\_  
SARAH GLADE GURNEY, MAYOR

ATTEST:

  
\_\_\_\_\_  
MARY GOURLEY, CITY CLERK

# Sonoma County Solar Implementation Plan

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Solar Sonoma County

March 2010



900 College Avenue, 2nd Floor

Santa Rosa, California 95404

(707) 284-9799

[www.solarsonomacounty.org](http://www.solarsonomacounty.org)



This report was funded by a Solar America Cities program grant through Solar Sonoma County, Santa Rosa, California.<sup>1</sup>

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<sup>1</sup> <http://www.solaramericacities.energy.gov/>

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## **Executive Summary**

Solar power and energy efficiency constitute a win-win formula to jump start the local economy and effectively respond to the climate change crisis. To address these important opportunities, this *Sonoma County Solar Implementation Plan* was prepared by Solar Sonoma County, a nonprofit public/private consortium of local governments, businesses, other entities and individuals working collaboratively to identify and implement initiatives to promote, expand, and accelerate solar power and energy efficiency throughout Sonoma County, under a U.S. Department of Energy Solar America Cities grant administered by the City of Santa Rosa.<sup>2</sup>

### **Goals**

The *Solar Implementation Plan* (SIP) provides strategies for collaboration between local governments and the private sector to reduce market barriers to the installation of solar electric systems, solar thermal systems, and energy efficiency measures through advances in policy, financing, education, and market transformation. It will function as a road map and plan for our efforts to move our County and the nation to widespread adoption of solar energy and energy efficiency concepts.

The SIP is designed to encourage the installation of solar electric and solar thermal systems and to offset countywide peak energy demand *at minimum* — ideally meeting a significantly larger portion of countywide electrical demand ultimately — toward achieving GHG emissions reductions through increased energy efficiency and renewable energy generation.” It does this in two ways: New solar capacity and market transformation.

### ***New Solar Capacity***

The SIP supports the goals of Solar Sonoma County:

- Add 25 megawatts (MW) of new solar generation by May 2011,<sup>3</sup>
- Over the long-term, replace 250 MW of peak demand with a combination of solar energy generation and energy efficiency, and
- Support countywide GHG reduction targets.<sup>4</sup>

### ***Market Transformation***

In order to meet Solar Sonoma County’s 2011 goal, the SIP focuses on regional strategies for market transformation to remove financial, regulatory, and educational barriers to residential and non-residential property owner participation. Market transformation on a countywide scale offers several advantages to local governments; these include the ability to coordinate with government, business, and community partners, to collaborate on the best practices for the use of regional resources, and to avoid duplicate or competing efforts. In addition, focusing on the countywide market allows local

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<sup>2</sup> Solar Sonoma County: <http://www.solarsonomacounty.org/>

<sup>3</sup> In March 2008, when the Solar America Cities grant was awarded, there were 13 MW of installed solar power systems in the county. According to PG&E, an additional 10.75 MW of solar electric generation have been added to Sonoma County between March 2008 and January 2010.

<sup>4</sup> Reduce GHG emissions to 25 percent below 1990 levels by 2015.

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governments to identify ways to collaborate on standardizing policy and regulation, aiding in reducing vendor costs through streamlined permitting and code compliance procedures, updating municipal codes for additional clean energy opportunities, and pursuing long-term strategies for sustainable community planning.

**Market Barriers**

Market barriers and proposed solutions were identified through a stakeholder process that included input from the Solar Sonoma County (SSC) Working Group (a 52-member taskforce made up of stakeholders from government, industry, business, and community), the SSC Board of Directors and Advisory Board, members of the SSC Solar Vendor, Energy Efficiency Vendor, and Policy/Finance/Incentives committees, the U.S. Department of Energy Solar America Cities technical team, and research into activities by other Solar America Cities communities<sup>5</sup> and local government programs.

Key market barriers include:

- Differences in permitting, code compliance, building codes, zoning, and General Plan process relating to solar and energy efficiency that require vendors to track multiple regulatory rules across jurisdictions,
- Need for education among building department staff, and elected and executive-level government officials regarding emerging policy and technological opportunities,
- Need for education among local solar and efficiency vendors about energy code issues and building collaborative working relationships with local building officials,
- Lack of central, searchable library of requests for bid for solar and efficiency projects,
- Underused opportunities to leverage existing funding resources, and
- Lack of residential and non-residential property owner awareness about the economic, environmental, and personal benefits of solar and energy efficiency.
- Lack of a neutral energy advocate to assist residential property owners with up-to-date information on solar and efficiency information, options and incentives.

**Recommendations**

The recommendations included in the SIP were selected by the Solar Sonoma County (SSC) Working Group and Advisory Board from a field of more than 50 ideas suggestions compiled through the above cited stakeholder process. Each recommendation is presented in the report with its associated market barrier, benefits, resources, case studies, constraints, and tasks:

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<sup>5</sup> U.S. Department of Energy: Solar America Cities: <http://www.solaramericacities.energy.gov/>

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***Policies/Regulations***

**1 — Regional Standards:** Seek opportunities to create regional standards that simplify the regulatory process for solar generation and energy efficiency projects, including permitting, code compliance, municipal building code scope/content, zoning ordinances, and general plan elements/language.

***Financing/Incentives***

**2 — Redevelopment/Community Development/Enterprise Fund Programs:** Seek opportunities within existing dedicated public funding programs (e.g., redevelopment, community development, and enterprise funds) to focus on solar generation and energy efficiency public agency projects within the scope of the funding program.

***Education/Outreach***

**3 — Training for Government Staff/Officials and Solar/Efficiency Vendors:** Seek opportunities and resources to provide government staff and elected officials with training and education on solar energy and energy efficiency to help support policy and permitting/code compliance decisions, and seek opportunities to encourage and support training and certification for solar and efficiency vendors in industry protocols, local codes and standards, and State building codes.

**4 — Education for Community:** Seek opportunities to connect citizens with solar electric, solar thermal, and energy efficiency information and services through existing government channels; seek new opportunities for government to educate the community on solar power and energy efficiency and leverage non-governmental educational opportunities, increasing public awareness and making them more available to the community.

***Market Transformation***

**5 — Clean Energy Advocate Program:** Support and promote the new countywide Clean Energy Advocate program, help grow public awareness of this program, help grow public awareness of the program, and assist in identification of homeowners whose homes would be good candidates for solar and efficiency measures.

**6 — Request-for-Proposal/Bid Clearinghouse:** Promote the creation of a countywide Web portal for solar and efficiency government requests-for-bids to assist local vendors in identifying bidding opportunities and providing competitive bids, and encourage government members of SSC to participate.

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## Introduction

Solar power and energy efficiency constitute a win-win formula to jump start the local economy and effectively respond to the climate change crisis. To address these important opportunities, this *Sonoma County Solar Implementation Plan* was prepared by Solar Sonoma County, a nonprofit public/private consortium of local governments, businesses, and other entities and individuals working collaboratively to identify and implement initiatives to promote, expand, and accelerate solar power and energy efficiency throughout Sonoma County under a U.S. Department of Energy Solar America Cities grant administered by the City of Santa Rosa.<sup>6</sup>

The *Solar Implementation Plan* (SIP) provides strategies for collaboration among local governments and the private sector to reduce market barriers to the installation of solar electric and solar thermal systems, and energy efficiency measures, through advances in policy, financing, education, and market transformation. It will function as a road map and plan for our efforts to move our County and the nation to widespread adoption of solar energy and energy efficiency concepts.

The goals of the plan are to make the best use of government and private sector resources to promote widespread adoption of solar and energy efficiency measures, prevent duplication of effort, engage a wide range of community stakeholders, standardize clean energy implementation processes, support local, State, and Federal greenhouse gas emission reduction goals, and support Solar Sonoma County's goal to install 25 megawatts (MW) of new solar energy generation in Sonoma County by May 2011.

The SIP includes six recommendations selected by the Solar Sonoma County Working Group and Advisory Board from more than 50 project ideas generated by SSC members and research into activities by other Solar America Cities communities<sup>7</sup> and local government programs (see Appendix 1: *Solar Implementation Plan — History*).

## Background

Bringing solar power into the mainstream in Sonoma County has long been the goal of a dedicated team of local business, government, and community supporters. The effort began in 2002 with the formation of Solar Sebastopol, which worked to install 1 megawatt (MW) of new solar generation within the City of Sebastopol. Later the group partnered with the City of Santa Rosa to serve the entire county under a new name (Solar Sonoma County), a new format (public/private consortium), with new funding (U.S. Department of Energy Solar America Cities grant), and a new goal: install 25 MWs of solar power within Sonoma County by May 2011.<sup>8</sup>

As the local renewable energy movement has grown, global forces have emerged that lend new urgency to the vision of expanded implementation of solar power: economic recession and climate change caused by increasing greenhouse gas emissions.

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<sup>6</sup> Solar Sonoma County: <http://www.solarsonomacounty.org/>

<sup>7</sup> U.S. Department of Energy: Solar America Cities: <http://www.solaramericacities.energy.gov/>

<sup>8</sup> See Appendix 2, *Solar Implementation Plan — History*

## **Economic Recession**

Since December 2007, the nation has experienced its worst economic recession in six decades, beginning in the housing sector, expanding to the financial and consumer sectors, and eventually affecting the global economy. The California unemployment rate (12.4 percent in March 2010) is at its highest since 1945 with four-fifths of the losses occurring between July 2008 and July 2009. In addition, the State's construction industry experienced early and steady job loss over the past two and a half years<sup>9</sup> and local construction experienced a 14.9 percent job loss between August 2008 and 2009.<sup>10</sup> Meanwhile, Sonoma County's overall unemployment rate reached 10.1 percent in October 2009,<sup>11</sup> which is on par with the national average of 10.2 percent. Rising unemployment and job losses are cited as "concerning trends" in the *2010 Sonoma County Indicators* report published by the Sonoma County Economic Development Board, which noted that over the past year the number of jobs in Sonoma County has declined by five percent.<sup>12</sup>

According to the California Employment Development Department, the national economy is about to enter a period of recovery; however, California's economic recovery is expected to lag behind the nation because the State has experienced greater job losses and government budget challenges on the State and local level.

In Sonoma County, the federal American Recovery and Reinvestment Act of 2009 (ARRA), which provides funding for job creation and energy efficiency/renewable energy programs, the Sonoma County Retrofit/Renewables Program, which will soon provide market transformation infrastructure, and the Sonoma County Energy Independence Program (SCEIP),<sup>13</sup> which provides financing for solar and other clean energy systems and efficiency retrofits, offer a unique opportunity to encourage investment in clean energy technology, grow the local market for solar and efficiency services, create green economy jobs, and jump-start the local economy. A preliminary report on SCEIP's job-creation effects indicates that Sonoma County construction-related jobs have increase by 8.4 percent since the program's inception in March 2009, in a period relative decline in jobs for neighboring jurisdictions.<sup>14</sup>

## **Climate Change**

To prevent and mitigate impacts created by climate change and rising global temperature, the international scientific community has determined a "safe" upper limit for GHGs to be 350 parts-per-million (ppm), which occurred in 1990; the current GHG level is 390 ppm.<sup>15</sup> At the December 2009

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<sup>9</sup> *A Labor Day Briefing for California*, California Employment Development Department, September 2009

<sup>10</sup> *The California Economy: Bounce of Splat? What Next?* Dr. Christopher Thornberg, Beacon Economics, [http://www.sonoma-county.org/edb/pdf/2009/whats\\_next.pdf](http://www.sonoma-county.org/edb/pdf/2009/whats_next.pdf)

<sup>11</sup> California LaborMarketInfo, [www.labormarketinfo.edd.ca.gov/](http://www.labormarketinfo.edd.ca.gov/)

<sup>12</sup> *2010 Sonoma County Indicators*, Sonoma County Economic Development Board, [http://www.sonoma-county.org/edb/pdf/2010/sotc\\_indicators.pdf](http://www.sonoma-county.org/edb/pdf/2010/sotc_indicators.pdf)

<sup>13</sup> Sonoma County Energy Independence Program, <http://www.sonomacountyenergy.org/>

<sup>14</sup> "Growth in Construction Economic Activity in Sonoma County and the Sonoma County Energy Independence Program," Sonoma County Water Agency, November 18, 2009; <http://www.scwa.ca.gov/files/docs/news/Economic-Activity-and-SCEIP-Nov-232009-final.pdf>

<sup>15</sup> "Climate change refers to any significant change in measures of climate (such as temperature, precipitation, or wind) lasting for an extended period (decades or longer). Climate change may result from: natural factors, such as changes in the sun's intensity or slow changes in the Earth's orbit around the sun; natural processes within the climate system (e.g., changes in

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United Nations Climate Change Conference (COP15) in Copenhagen, Intergovernmental Panel on Climate Change (IPCC) Director Dr. Rajendra Pachauri opened the conference by observing that “if [the global] temperature increase is to be limited to between 2.0° and 2.4° Celsius, global emissions must peak no later than 2015.”

Known as the *scientific imperative*, this global deadline illustrates how climate change, which affects every aspect of the local community from food and energy security to economic stability to resource availability, is redefining government’s role as protector of community health and safety. New policies and mandates at every level of government call for the expansion of solar power and energy efficiency initiatives:

- On the federal level, climate change is a factor in the American Recovery and Reinvestment Act of 2009 federal stimulus package,<sup>16</sup> which includes funding for energy efficiency programs, and is the primary focus of the American Clean Energy and Security Act,<sup>17</sup> which is currently under consideration in the U.S. Senate and includes provisions for increasing solar energy, setting energy efficiency benchmarks, setting GHG reduction targets, and transitioning to a clean energy economy.
- On the state level, Assembly Bill 32 — Global Warming Solutions Act of 2006,<sup>18</sup> which mandates state GHG-reduction targets (1990 levels by 2020; 80 percent below 1990 levels by 2050), opened the door for a series of new laws focused on reducing GHG emissions and transforming the market for clean energy services, including local government financing for solar and energy efficiency projects under Assembly Bill 811.<sup>19</sup> Assembly Bill 474 expanded the scope of AB 811 to include water conservation measures, augmenting that statute.<sup>20</sup> Senate Bill 375 requires the California Air Resources Board to set regional greenhouse gas reduction targets for automobile/light truck emissions and develop “sustainable community strategies” for land use planning to reduce the urban sprawl that leads to long commutes and increasing vehicle emissions.<sup>21</sup>
- On the local level, climate change has spurred an unprecedented level of regional collaboration between governments, business, and the community. Since 2001, the Climate Protection Campaign (CPC) has facilitated countywide implementation of the International Council for Local Environmental Initiatives (ICLEI) five-step climate-awareness campaign that fosters local collaboration to establish a GHG emissions baseline, set a reduction target, develop a local climate action plan, implement the action plan, and monitor the results. Most recently, the Sonoma County Transportation Authority formed the Sonoma County Regional Climate Protection Agency (RCPA), the first agency of its kind in the State, to address issues of regional and local collaboration on climate issues.

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ocean circulation); or human activities that change the atmosphere’s composition (e.g., through burning fossil fuels) and the land surface (e.g., deforestation, reforestation, urbanization, desertification, etc.),” U.S. Environmental Protection Agency, <http://www.epa.gov/climatechange/basicinfo.html>

<sup>16</sup> <http://www.govtrack.us/congress/bill.xpd?bill=h111-1&tab=summary>

<sup>17</sup> <http://www.govtrack.us/congress/bill.xpd?bill=h111-2454&tab=summary>

<sup>18</sup> <http://www.arb.ca.gov/cc/ab32/ab32.htm>

<sup>19</sup> [http://info.sen.ca.gov/pub/07-08/bill/asm/ab\\_0801-0850/ab\\_811\\_bill\\_20080721\\_chaptered.pdf](http://info.sen.ca.gov/pub/07-08/bill/asm/ab_0801-0850/ab_811_bill_20080721_chaptered.pdf)

<sup>20</sup> [http://info.sen.ca.gov/pub/09-10/bill/asm/ab\\_0451-0500/ab\\_474\\_bill\\_20091011\\_chaptered.pdf](http://info.sen.ca.gov/pub/09-10/bill/asm/ab_0451-0500/ab_474_bill_20091011_chaptered.pdf)

<sup>21</sup> [http://info.sen.ca.gov/pub/09-10/bill/sen/sb\\_0351-0400/sb\\_375\\_bill\\_20090414\\_amended\\_sen\\_v98.pdf](http://info.sen.ca.gov/pub/09-10/bill/sen/sb_0351-0400/sb_375_bill_20090414_amended_sen_v98.pdf)

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## **Collaboration**

Sonoma County governments have set several national precedents for regional collaboration. The first collaborations arose as part of the ICLEI program under which all ten local governments committed to reducing GHG emissions (2002), determined an emissions baseline for their respective municipal operations (2003), determined a countywide baseline for total GHG emissions (2004), set a countywide GHG reduction target (2005) — 25 percent below 1990 levels by 2015 — and supported the development of the *Sonoma County Community Climate Action Plan*, which was published by the CPC in 2008.<sup>22</sup>

All 10 local governments expanded their regional collaboration in 2008–2009 by participating in:

- Solar Sonoma County, a 501c3 nonprofit public/private consortium Working Group consisting of representatives from all ten local governments, business, community, and energy efficiency and renewable energy industries to explore opportunities for collaboration to promote the installation of solar technology and systems and energy efficiency measures, and overall market transformation;<sup>23</sup>
- Sonoma County Regional Climate Protection Authority, established in 2009 to improve inter-agency and community collaboration and coordinate government and community initiatives for climate protection;<sup>24</sup>
- Sonoma County Energy Independence Program (SCEIP), (the first comprehensive and completely integrated countywide Property-Assessed-Clean-Energy [PACE] financing program in the nation) created by the County of Sonoma to provide property tax assessment financing for solar and energy efficiency projects using Assembly Bill 811;<sup>25</sup> and
- Sonoma County Retrofit/Renewables Program, forthcoming in spring 2010, was initiated to provide residential and commercial property owners with one-stop access to energy analysis, certified vendors, and a financing package for solar and energy efficiency retrofit projects, working in collaboration with SCEIP and leveraging that existing resource.<sup>26</sup>

## **Goals and Objectives**

The *Solar Implementation Plan* (SIP) is designed to build on existing regional collaborations to encourage the installation of solar electric and solar thermal systems, offset peak energy demand through renewable energy generation, and reduce GHG emissions through energy efficiency.

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<sup>22</sup> *Sonoma County Community Climate Action Plan*, Climate Protection Campaign, 2008; <http://www.coolplan.org>

<sup>23</sup> Solar Sonoma County, <http://www.solarsonomacounty.org>

<sup>24</sup> Sonoma County Regional Climate Protection Authority, <http://www.sctainfo.org/rcpa.htm>

<sup>25</sup> Sonoma County Energy Independence Program, <http://www.sonomacountyenergy.org>

<sup>26</sup> Sonoma County Retrofit/Renewables Program, Sonoma County Regional Climate Protection Authority, <http://www.sctainfo.org/rcpa.htm>

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**New Solar Capacity**

The SIP supports the goals of Solar Sonoma County:

- Add 25 megawatts (MW) of new solar generation by May 2011,
- Over the long-term, replace 250 MW of peak demand with a combination of solar energy generation and energy efficiency, and
- Support countywide GHG reduction targets.

In March 2008, when the Solar America Cities grant was awarded, there were 13 MW of installed solar power systems in the county. According to PG&E, an additional 10.3 MW of solar electric generation have been added to Sonoma County between March 2008 and December 2009, aligning with the initiation of program efforts in Solar Sonoma County; this number does not include solar thermal system installations.

**Market Transformation**

In order to meet its 2011 goal in a timely manner, the SIP focuses on regional strategies for market transformation to remove financial, regulatory, and educational barriers to property owner participation. Market transformation on a countywide scale offers several advantages to local governments including the ability to coordinate with government, business, and community partners; to collaborate on the best practices for the use of regional resources; and to avoid duplicate or competing efforts. In addition, focusing on the countywide market allows local governments identify ways to collaborate on standardizing policy/regulation issues such as reducing vendor costs through streamlined permitting and code compliance procedures, updating municipal codes for additional clean energy opportunities, and pursuing coordinated long-term strategies for sustainable community planning.

**Recommendation List**

The SIP includes six recommendations chosen by members of the Solar Sonoma County Working Group and Advisory Board.

***Policies/Regulations***

**1 — Regional Standards:** Seek opportunities to create regional standards that simplify the regulatory process for solar generation and energy efficiency projects, including permitting, code compliance, municipal building code scope/content, zoning ordinances, and general plan elements/language.

***Financing/Incentives***

**2 — Redevelopment/Community Development/Enterprise Fund Programs:** Seek opportunities within existing dedicated public funding programs (e.g., redevelopment, community development, and enterprise funds) to focus on solar generation and energy efficiency public agency projects within the scope of the funding program.

***Education/Outreach***

**3 — Training for Government Staff/Officials and Solar/Efficiency Vendors:** Seek opportunities and resources to provide government staff and elected officials with training and education on solar energy

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and energy efficiency to help support policy and permitting/code compliance decisions, and seek opportunities to encourage and support training and certification for solar and efficiency vendors in industry protocols, local codes and standards, and State building codes.

**4 — Education for Community:** Seek opportunities to connect citizens with solar electric, solar thermal, and energy efficiency information and services through existing government channels; seek new opportunities for government to educate the community on solar power and energy efficiency and leverage non-governmental educational opportunities, increasing public awareness and making them more available to the community.

***Market Transformation***

**5 — Clean Energy Advocate Program:** Support and promote the new countywide Clean Energy Advocate program, help grow public awareness of this program, help grow public awareness of the program, and assist in identification of homeowners whose homes would be good candidates for solar and efficiency measures.

**6 — Request-for-Proposal/Bid Clearinghouse:** Promote the creation of a countywide Web portal for solar and efficiency government requests-for-bids to assist local vendors in identifying bidding opportunities and providing competitive bids, and encourage government members of SSC to participate.

**Resources and Market Barriers**

**Resources**

To reach the goal of 25 MWs of new solar power by 2011 requires a clean-energy market transformation that will result in the removal of market barriers to solar/efficiency, the stimulation of market demand, the development of a trained workforce, and the creation of financing mechanisms to underwrite local investment in the new green economy. The recommendations included in the SIP are designed to coordinate with and enhance existing resources/programs dedicated to local market transformation, including:

- Sonoma County Regional Climate Protection Authority: In 2009, through their representation on the Sonoma County Transportation Authority, local governments supported the establishment of the Sonoma County Regional Climate Protection Authority (RCPA) to improve communication, collaboration, and coordination on climate change issues among governments, business, and the community, and establish a clearinghouse for planning, funding, and implementation efforts to reduce GHG emissions.
- Sonoma County Energy Independence Program: Founded in March 2009, SCEIP is the first comprehensive and completely integrated countywide Property-Assessed-Clean-Energy (PACE) financing program in California under Assembly Bill 811. The County of Sonoma expanded the application of the PACE concept to a multi-jurisdictional program that is supported by all nine Sonoma County cities. Established during a national economic recession that significantly limits

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traditional financing resources, SCEIP removes one of the biggest market barriers — lack of access to affordable financing — and is now a model for PACE programs across the nation.

- **Grant Programs:** Economic recession and climate change are the focus of the federal American Recovery and Reinvestment Act (ARRA), which funds local government programs for job creation and energy efficiency and renewable energy generation. Local governments have applied for ARRA funds through several grant programs including the Energy Efficiency and Conservation Block Grant (EECBG) program, State Energy Program (SEP), and the U.S. Department of Energy’s Retrofit Ramp Up program.<sup>27</sup> On February 10, 2010, the State Energy Program review committee released its recommendation that the California Energy Commission approve two local grant proposals: \$1,914,000 to the Sonoma County Regional Climate Protection Authority through an Association of Bay Area Governments SEP grant for residential retrofitting and \$2,537,000 to the County of Sonoma through a SEP grant for municipal financing initiatives; final approval is anticipated shortly. Additional funding may also be available through the American Clean Energy and Security Act currently in Congress.
- **Sonoma County Retrofit/Renewables Program:** Using funds from their EECBG grants, the County of Sonoma and the cities of Santa Rosa, Rohnert Park, and Petaluma are underwriting a countywide retrofit/renewables program for market transformation. Set to launch in June 2010, the program will provide one-stop access to the resources residential/commercial property owners need to complete an energy retrofit and solar installation including energy analysis and project planning, certified solar and energy efficiency vendors, and a financing package including SCEIP, rebates, incentives, and other applicable funding resources.

### **Market Barriers**

While local efforts to promote solar power and energy efficiency will benefit from the above mentioned programs for local coordination, financing, and market transformation, the marketplace still faces a series of barriers that local government can influence, including:

- Different permitting and building code/inspection programs in each jurisdiction;
- Hardcopy processing of solar/efficiency permitting paperwork, which requires vendors to drive paperwork to multiple offices per project;
- Different zoning ordinances and general plan regulations regarding solar and efficiency in each jurisdiction;
- Varying levels of training for government staff, elected officials, and vendors regarding solar and efficiency technologies and code compliance in each jurisdiction;
- Different systems and locations for posting Requests for Bid for solar and efficiency projects in each jurisdiction;

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<sup>27</sup> The Sonoma County Regional Climate Protection Authority participated in a statewide proposal for the Ramp Up Program that could bring an additional \$1,650,000 for local residential retrofitting.

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- Need for improved communication and coordination between government building officials and solar/efficiency vendors to reduce project processing time/cost and support high-quality, cost-effective projects;
- Need for innovative methods to finance cost-effective solar and efficiency projects for municipal and private buildings;
- Lack of awareness about, and identification of opportunities to use, passive solar design concepts;
- Lack of consumer understanding about the economic and environmental benefits of solar power and energy efficiency, and
- Consumer hesitance about solar thermal technologies based on the 1970s boom/bust cycle in which installations of early solar thermal systems were not sufficiently supported by installer expertise and maintenance services.

In addition, local governments currently face internal barriers caused by revenue shortfalls and staff downsizing. The solar power and energy efficiency strategies outlined below are designed to minimize the demand on government funding/staff time and capitalize on the resources of existing market transformation efforts. In addition, the SIP includes additional long-term strategies (see Appendix 2: Addition SIP Recommendations) in anticipation of improved fiscal conditions in the future

## **Strategies and Actions**

### **Policies/Regulations**

#### **1 — Regional Standards**

Local governments can influence the market for solar power and energy efficiency at several levels from project permitting and code compliance inspections, to municipal green building codes and zoning regulations, to General Plan strategies for long-term implementation of clean power and GHG-reducing goals. Within each of these levels there are opportunities for removing market barriers and encouraging solar and efficiency improvements.

**Marketplace Need:** In the current situation, each jurisdiction maintains its own criteria for these building and planning processes and vendors must adjust their process for obtaining permits, complying with codes, and finding local incentives for solar and efficiency projects to accommodate different rules between jurisdictions.

**Regulatory Need:** In response to AB32 and SB375,<sup>28</sup> cities and counties are formulating strategies for GHG reduction as a part of short-term and long-term planning for both municipal operations and the community as a whole. As a reasonable mitigation for climate change under the California Environmental Quality Act (CEQA), the California Attorney General's office recommends development of a climate action plan and states that a climate action plan (CAP) should be prepared at the same time as

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<sup>28</sup> Senate Bill 375, <http://www.calapa.org/attachments/wysiwyg/5360/SB375final.pdf>

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the General Plan update and be included in the associated CEQA-required Environmental Impact Report (EIR).<sup>29</sup>

Recognizing the current lack of legislative or other direction on the content of CAPs and the need to establish criteria that would allow CAPs to be used in CEQA cumulative impacts analysis, the State has developed new CEQA guidelines for climate change mitigation.<sup>30</sup> Since 2001, all 10 local governments in Sonoma County have participated in a climate protection initiative facilitated by the Climate Protection Campaign (CPC) using the ICLEI — Local Governments for Sustainability program.<sup>31</sup> Through this initiative municipal GHG targets and CAPs were developed; in 2005, a community-wide GHG target was set (i.e., 25 percent below 1990 GHG emissions levels by 2015); and in 2008 the *Community Climate Action Plan* was published by the CPC that includes a comprehensive emissions analysis and roster of potential solution strategies/approaches (including GHG reduction estimates, partner agencies, and investment estimations) to reach the local GHG target.<sup>32</sup>

In the current context of new CEQA guidelines and EIR requirements as well as the establishment of the Sonoma County Regional Climate Protection Authority (RCPA), the logical forum for a discussion of opportunities for regional standards collaboration exists through the RCPA and in the Sonoma County Planning Directors Monthly Meeting, facilitating a discussion of (1) new requirements, (2) goals and objectives related to land use planning and transportation identified by the RCPA and its member governments, (3) the science-based research, analysis, and proposed solutions contained in the *Community Climate Action Plan*, (4) new solution strategies, and (5) use of guidelines and planning principles contained in resource documents such as *Model Policies for Greenhouse Gases in General Plans* issued by the California Air Pollution Control Officers Association (CAPCOA).<sup>33</sup>

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<sup>29</sup> California Attorney General's Office, "Climate Change, the California Environmental Quality Act, and General Plan Updates FAQ," [http://ag.ca.gov/globalwarming/pdf/CEQA\\_GP\\_FAQs.pdf](http://ag.ca.gov/globalwarming/pdf/CEQA_GP_FAQs.pdf)

<sup>30</sup> California Environmental Quality Act guidelines update, <http://ceres.ca.gov/ceqa/guidelines/>

<sup>31</sup> ICLEI, <http://www.icleiusa.org/>

<sup>32</sup> *Community Climate Action Plan*, published in 2008, the CCAP contains science-based emissions analysis and thirty-nine quantified GHG reduction solutions supported by detailed research. The plan and 500-pages of supporting research are available at [www.coolplan.org](http://www.coolplan.org)

<sup>33</sup> CAPCOA *Model Policies for Greenhouse Gases in General Plans*, <http://www.capcoa.org/modelpolicies/CAPCOA%20Model%20Policies%20for%20Greenhouse%20Gases%20in%20General%20Plans%20-%20June%202009.pdf>

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The following table shows opportunities for regional collaboration on standards that affect solar and efficiency projects.

<b>Table 1: Regional Standards Summary</b>			
Regulation(s)	Benefits	Convening Entity	Stakeholders
Standardized Permit Forms/ Code Compliance Procedures	Less processing time (government staff and vendors) Streamlined documentation Permit fee and processing incentive options Eliminate vendor time needed to track different jurisdiction permitting requirements Uniform risk assessment protocols	Redwood Empire Association of Code Officials  Sonoma County Regional Climate Protection Authority	Building officials/staff Fire officials Solar vendors <sup>34</sup> Efficiency vendors <sup>35</sup>
Green Building Codes	Uniform best practices Reduce code development cost Address new construction and remodeling Easier to adopt new code improvements Eliminate vendor time needed to track different jurisdiction codes	Redwood Empire Association of Code Officials  Sonoma County Regional Climate Protection Authority	Building officials/staff Fire officials Solar vendors Efficiency vendors
Zoning Ordinances	Create opportunities to encourage solar/efficiency application of land use policy Create incentives for solar/efficiency	Sonoma County Planning Directors Monthly Meeting	Elected officials Government planners Citizens (property owners)
General Plans	Establish priorities for long-term implementation of solar/efficiency Coordinate with regional transportation and air quality authorities	Sonoma County Regional Climate Protection Authority	Elected officials Government planners Citizens (property owners)

**1.A — Permitting and Code Compliance**

**Market Barrier:** Solar and efficiency vendors report that the current permitting situation (e.g., different forms and fees for each municipality, unpredictable processing times) presents a barrier to cost-effective service because vendors must spend time tracking and conforming to different permitting and code compliance rules for each community in which they work and coping with delays in permit processing. In addition, the current reliance on hardcopy processing of permits and code compliance documents requires vendor time to hand-deliver paperwork to building department offices.

**Recommendation:** Standardize and streamline permitting/building code compliance processes, work with contractors to ensure timely processing of permit applications, digitize forms to reduce the amount of time required to prepare the forms and process applications, and institute incentives for

<sup>34</sup> Includes solar electric and solar hot water professionals.

<sup>35</sup> Includes building performance contractors, heating/ventilation/air conditioning (HVAC) vendors, plumbing and electrical professionals.

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solar/efficiency projects. Specific issues for regional consideration are: regional permitting forms for large solar electric systems, solar thermal systems, and energy efficiency measures; incentive options such as reduced/waived permit, plan, and design review fees, basing fees on the hourly rate for actual time spent on the project, and expedited permitting; standardized building code compliance requirements; and obtaining widespread use of regional forms and processes among building officials and solar/efficiency vendors.

**Benefits:** Standardizing and streamlining permitting/code compliance processes and implementing incentives on a regional scale offer several benefits, including:

- **Less Time and Lower Fees:** Using standardized forms, building code officials can minimize or eliminate the time required to translate custom vendor documentation into criteria required for approval. Standardized forms could also eliminate the need for plan review in many cases, which reduces one element of permit cost, and reduces staff time. In addition, creating an online digitized permitting process would reduce vendor costs in time and money to hand deliver paperwork to building department offices.
- **Reduced Bid and Job Costs:** Coordinating permitting fees across jurisdictions would simplify the vendor bidding process and reduce time required to track and incorporate variations in fee structures.
- **Uniform Risk Evaluation:** The process of establishing standardized permitting forms would enable building officials to confer and obtain regional consensus on mitigating solar- and efficiency-specific risk factors such as fire venting and solar mounting safety.

**Resources:** Three local entities are suited to serve as co-facilitators to establish regional permitting and code compliance processes: Redwood Empire Association of Code Officials (REACO),<sup>36</sup> the Sonoma County Regional Climate Protection Authority (RCPA), and Solar Sonoma County. In addition, the collaboration would benefit from the participation by representatives of the local solar electric/thermal and building performance industries via trade groups such as California Solar Energy Industries Association,<sup>37</sup> North Coast Builders Exchange,<sup>38</sup> and California Building Performance Contractors Association.<sup>39</sup>

**Case Studies:**

- **Forms:** In 2009, Steve Pantazes, Building Official for the Town of Windsor and Solar Sonoma County Advisory Board member, led an effort to design a regional solar system permit application form with input from the five-county Redwood Empire Association of Code Officials (REACO). The form, which addresses residential solar systems of 5 kW or less, has been distributed to local building departments. Pantazes reports that both building officials are at varying stages and solar vendors

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<sup>36</sup> Redwood Empire Association of Code Officials, <http://www.reaco.org/>

<sup>37</sup> California Solar Energy Industries Association, <http://calseia.org/>

<sup>38</sup> North Coast Builders Exchange, <http://www.ncbeonline.com/>

<sup>39</sup> California Building Performance Contractors Association, <http://www.cbpc.org/>

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are inconsistent in adopting the form due to collateral challenges such as severely reduced building department staffing in local jurisdictions and the need for further education and training in using the form for building department staff and vendors. Solar Sonoma County also hosted a Solar Permitting Symposium on November 10, 2009, to discuss regional permitting standards that included building officials and solar vendors. SSC is also initiating quarterly forums to facilitate ongoing building official-vendor/contractor collaboration.

- **Expedited Processing:** Solar Sonoma County's Solar America Cities partner, Minneapolis, Minnesota, is incorporating accelerated project permitting, reduced permit fees, and "feebates" into solar projects to encourage adoption. Portland, Oregon, has instituted an electronic permit submittal process in which the application is reviewed within 24 hours by a staff member trained in solar.<sup>40</sup> Sacramento, California, has developed a checklist for residential solar based on a universal application prepared by Sacramento Municipal Utilities Department (SMUD).<sup>41</sup>
- **Incentives:** The U.S. Department of Energy's Energy Efficiency and Renewable Energy (EERE) program's Database of State Incentives for Renewables and Efficiency (DSIRESOLAR) recommends incentives such as a flat-fee permit structure or waiving permit fees and fast-tracking permitting for solar projects.<sup>42</sup> In addition, the DSIRE SOLAR notes that, for commercial properties, flat-fees based on actual permit processing costs are about 10 percent the cost of a valuation-calculated fee based on the overall project cost. Among jurisdictions that have waived solar permitting fees are Los Angeles, Santa Monica, and the counties of San Diego and San Bernardino. In addition, the City of San Jose does not collect building permit taxes on construction or installation of solar energy generation equipment. Builders in the County of San Bernardino who participate in the County's green building program receive accelerated plan review, priority inspections, design assistance, and community recognition for qualified projects. The City of Mill Valley waives select building permit fees for solar system installations that meet five City guidelines and comply with City regulations for the zoning district in which the installation is located.<sup>43</sup>

**Constraints:** While the regional solar application form developed by Pantazes and REACO has improved consistency among participating jurisdictions, several barriers still remain including (1) budget-related downsizing in building departments, which affects processing time, (2) need for guidance from elected leaders regarding the priority status of regional permitting/code compliance efforts, and (3) need for better mutual understanding between building officials and vendors about solar and efficiency project permitting, code compliance, and implementation methods.

**Tasks:** Convene and facilitate a discussion of permitting and code compliance opportunities through existing venues provided by the Redwood Empire Association of Code Officials, Solar Sonoma County, and Sonoma County Regional Climate Protection Authority, determine a strategy for identifying

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<sup>40</sup> Portland, Oregon, online permitting service: <http://www.portlandonline.com/bps/index.cfm?c=47394>

<sup>41</sup> Sacramento, California, permitting process update:

[http://sacramento.bizjournals.com/sacramento/stories/2009/10/26/story4.html?ana=from\\_rss#](http://sacramento.bizjournals.com/sacramento/stories/2009/10/26/story4.html?ana=from_rss#)

<sup>42</sup> "Permitting Incentives," DSIRE SOLAR, <http://www.dsireusa.org/solar/solarpolicyguide/index.cfm?id=16&printable=1>

<sup>43</sup> "City Policy Regarding Fee Waivers for Solar Energy Systems," November 22, 2005,

[http://www.co.marin.ca.us/depts/CD/main/pdf/BEST\\_pdf/solar/MillValley\\_FeeFlyer.pdf](http://www.co.marin.ca.us/depts/CD/main/pdf/BEST_pdf/solar/MillValley_FeeFlyer.pdf)

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appropriate regional protocols, and seek local approval for a regional proposal. Bring recommendations to local governing bodies as appropriate.

**1.B — Green Building Programs**

**Market Barrier:** Nine of the 10 local governments in Sonoma County have adopted green building codes, using primarily the Build It Green program for residential and Leadership in Energy and Environmental Design (LEED) program for commercial buildings. The majority of these green buildings codes are mandatory for new construction, three include protocols for renovation projects, and the point requirements and allocations differ between jurisdictions. The fact that the specifics and scope of the codes vary from community to community requires solar and efficiency vendors to spend time tracking and conforming to the specific programs for each community in which they work. In addition, smaller communities face a barrier to implementing more rigorous codes because they lack resources to develop them.

**Recommendation:** Create a regional green building program in order to (1) share lessons learned by each community including the effect of green building ordinances (GBOs) on the marketplace and cost-effective administration methods, (2) ensure every community has a green building program, (3) apply GBO standards to existing buildings by including renovation requirements, and (4) minimize market barriers to efficient processing of new and remodel green building projects.

**Benefits:** Standardizing green building programs on a regional scale offers several benefits, including:

- Less Time: A regional green building program would minimize the time required by vendors to track program protocols and customize project documentation to different requirements.
- Timely Cost-Effective Adoption of Program Updates: A regional green building program would provide a central system for evaluating new opportunities in green building protocols and technologies and facilitate the timely and cost-effective adoption of new best practices.<sup>44</sup>
- Support Future GHG Reduction Requirements: A regional green building program would position local governments to respond in a timely cost-effective manner to directives from State and Federal governments regarding GHG reduction (e.g., California Assembly Bill 32 that mandates an GHG reduction to 1990 levels by 2020), and explore more stringent remodeling triggers to extend green building standards and energy analysis to existing buildings.<sup>45</sup>

**Resources:** Three local entities are suited to serve as co-facilitators to establish a regional green building program: Redwood Empire Association of Code Officials (REACO), the Sonoma County Regional Climate Protection Authority (RCPA), and the Sonoma County Planning Directors Monthly Meeting.

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<sup>44</sup> The Solar America Cities partner Sacramento is preparing guidelines for implementing solar in historical districts and urban tree canopy and building height regulations to protect access to sunlight exposure for solar systems. The City of Cotati requires all new construction to pre-plumb for solar hot water.

<sup>45</sup> Local examples of mandatory remodeling triggers include Cotati (commercial over 2,500 sf), Healdsburg (residential over 500 sf), Sebastopol (commercial over 1,800 sf), and Marin County (residential over 1,000 sf)

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**Case Studies/Additional Resources:** CALGREEN: On January 12, 2010, the California Building Standards Commission unanimously adopted the first-in-the-nation mandatory Green Building Code (CALGREEN) for new buildings that requires increases in energy and water efficiency to assist in meeting the State's greenhouse gas reduction goals: achieve a 33 percent renewable energy capacity by 2020; reduce GHG emissions to 1990 levels by 2020; and achieve 80 percent reduction below 1990 levels by 2050. The mandatory program goes into effect on January 1, 2011, and includes additional, more stringent voluntary requirements to encourage deeper GHG reductions. It is intended to provide a baseline "plug-and-play" above-Title 24 code program. The program contains renewable energy guidelines such as south-facing building orientation for solar exposure, installation of solar electric and solar thermal systems, and roof space and pre-wiring for future solar.

**Constraints:** Developing a regional green building program will require staff time and the willingness to change or update existing green building program parameters to achieve a regional consensus.

**Tasks:** The Redwood Empire Association of Code Officials is currently reviewing the new State code provisions to identify opportunities to create a model code for regional adoption and is looking for input from community partners such as the Sonoma County Planning Directors Monthly Meeting, Sonoma County Regional Climate Protection Authority and other interested parties to identify appropriate strategies for achieving regional consistency in local green building codes and sharing of best practices.

### ***1.C — Zoning Ordinances***

**Market Barrier:** Zoning ordinances offer an opportunity to explore additional options for increasing solar and efficiency through regulatory streamlining and incentive opportunities.

**Recommendation:** Identify and implement options within zoning measures to encourage and support solar and efficiency. Some potential zoning options would be:

- **Solar Enhancement Zone:** Based on the model of the enterprise zone, a Solar Enhancement Zone (SEZ) would offer property owners within its boundaries a suite of incentives for new and existing building solar installations and energy efficiency retrofits, such as free permitting, fast-track permit processing, or high density bonus.
- **Infill Projects:** The SEZ could also apply to infill projects across multiple zones.
- **Solar Options:** The SEZ requirement might require the new construction owner to implement at least one of three solar options: solar electric, solar thermal, or passive solar design or offer a density bonus to developers who pre-wire/pre-plumb for solar electric and solar thermal or include preinstalled systems.

**Benefits:** Identifying zoning opportunities for solar/efficiency would support benefits such as:

- **Integration of Solar Energy Generation into Land Use Planning:** Focusing on opportunities available through zoning ordinances would support and inform the long-term General Plan effort to capture maximum solar energy generation capacity to minimize fossil-fuel use and peak demand load, while creating immediate incentives for solar and energy efficiency improvements in the short-term.

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**Resources:** The Sonoma County Permit and Resource Management Department (PRMD) will be investigating code updates for new construction to create incentives for solar installations as part of a code review to identify greenhouse gas reduction opportunities in zoning and general plan updates; this effort is funded by the County's American Recovery and Reinvestment Act (ARRA) Energy Efficiency and Conservation Block Grant program (EECBG).

**Case Studies:** The City of Sonoma has pioneered a variation on the solar enhancement zone concept with two programs: Solar Energy Business Loan and Energy Efficiency Matching Funds programs, which provide a local example of how incentives for solar and efficiency projects might be tied to zoning. Applicable to businesses with the City's redevelopment zones, the Solar Energy Business Loan Program provides a maximum loan amount of \$50,000 at 3 percent interest for owners of existing commercial properties who are installing solar electric or solar thermal systems. The Energy Efficiency Matching Funds Program provides a maximum \$1,000 dollar-for-dollar matching-fund loan for a range of efficiency improvements including lighting retrofits, insulation installation, weatherization measures, energy management systems, and HVAC system upgrades; the loan is forgivable after a year upon verification that the efficiency measures are installed and maintained.<sup>46</sup>

**Constraints:** The current economic recession has limited the resources and staff available to explore new planning strategies; however, regional collaboration on this issue could minimize the cost to individual governments and result in regional approaches that streamline processes and encourage the implementation of best practices.

**Tasks:** Convene discussion of zoning opportunities through the already scheduled Sonoma County Planning Directors Monthly Meeting code update process and share identified strategies and concepts with local government planning departments for early adoption.

### **1.D — General Plans**

**Background:** As the means by which communities set local priorities and define long-term goals, General Plans offer multiple opportunities to support the widespread adoption of solar electric, solar thermal, and energy efficiency. General Plans are also emerging as an important tool in regional planning to meet local and State GHG reduction targets. In 2005, Governor Schwarzenegger set a precedent by signing Executive Order S-3-05, which establishes a series of long-term GHG reduction targets for State agencies.<sup>47</sup> In 2006, Assembly Bill 32 (Global Warming Solutions Act) established a GHG target to reduce total statewide emissions to 1990 levels by 2020 and assigned the California Air Resources Board with the task to set regional targets and strategies in a Scoping Plan.<sup>48</sup> In addition, Senate Bill 375 (2008) established additional direction to local government on land use planning for GHG

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<sup>46</sup> City of Sonoma's Solar Energy Business Loan Program (<http://www.sonomacity.org/uploads/Econ%20Devel/CDA%20Guidelines%20Nov08Solar.pdf>); Energy Efficiency Matching Funds Program ([http://www.sonomacity.org/uploads/Econ%20Devel/CDA\\_Guidelines\\_Oct08Energy.pdf](http://www.sonomacity.org/uploads/Econ%20Devel/CDA_Guidelines_Oct08Energy.pdf))

<sup>47</sup> Executive Order S-3-05 requires State agencies to achieve 2000 GHG emission levels by 2010, 1990 GHG emission levels by 2020, and 80 percent below 1990 GHG emission levels by 2050.

<sup>48</sup> Climate Change Scoping Plan: A Framework for Change, California Air Resources Board, December 2008, [http://www.arb.ca.gov/cc/scopingplan/document/adopted\\_scoping\\_plan.pdf](http://www.arb.ca.gov/cc/scopingplan/document/adopted_scoping_plan.pdf)

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reduction.<sup>49</sup> In June 2009, the California Air Pollution Control Officers Association (CAPCOA) published *Model Policies for Greenhouse Gases in General Plans*,<sup>50</sup> which provides resources and guidance on incorporating GHG reduction goals into the General Plan process. In its report, CAPCOA emphasizes the importance of coordinating General Plan updates with regional planning tools such as regional “blueprint plans” (i.e., compendium of local government recommendations on land use and transportation provided to regional transportation/metropolitan planning entities), regional transportation plans, and air quality district attainment plans. The above initiatives highlight the growing importance of the General Plan process in capturing the GHG-reducing potential of renewable energy and energy efficiency and as a conduit for regional coordination.

**Recommendation:** Local governments can engage RCPA and NGOs input and support to enhance local General Plans through the inclusion of best practices and forward-thinking policies for renewable energy and energy efficiency. This will allow local governments to maximize opportunities for realizing a sustainable, clean-energy community and achieving compliance with State and local GHG reduction goals.

**Benefits:** Updating General Plans for renewable energy and energy efficiency provisions provide a variety of benefits, including:

- State and local GHG reduction compliance: General Plan provisions can expand opportunities for GHG reduction through measures such as designation of and protection for sites suited to renewable energy generation and flexible zoning to allow use of open space for renewable energy projects.
- Expansion of new construction markets for renewable energy and energy efficiency: General Plan provisions for new construction can set the long-term vision for green building and renewable energy regulations that capture maximum cost-effectiveness through the integration of solar energy generation, passive solar, and efficiency features during the project design phase.
- Optimize green building standards: Establish preferred priority status for green building policy that exceeds State requirements and incorporates emerging best practices such as “solar-ready” standards and passive solar requirements for new buildings.
- Identify and remove project processing barriers: General Plan provisions can establish protocols for streamlining processing procedures for new and existing building projects for renewable energy and energy efficiency.

**Resources:** The Sonoma County Regional Climate Protection Authority (RCPA) and the Sonoma County Planning Directors Monthly Meeting are likely resources for convening a regional discussion on climate

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<sup>49</sup> California Senate Bill 375 (2008) directs the California Air Resources Board to set regional reduction targets for transportation-related GHG emissions and focus on opportunities for GHG reduction through “sustainable community strategies” for land-use planning.

<sup>50</sup> Lee, Barbara, and Yu, John. 2009. *Model Policies for Greenhouse Gases in General Plans*, California Air Pollution Control Officers Association (CAPCOA), <http://www.capcoa.org/modelpolicies/CAPCOA-ModelPolicies-6-12-09-915am.pdf>

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protection strategies for general plan updates. In addition, the new Attorney General rules regarding the State's new CEQA and EIR requirements for climate action plans (CAPs)<sup>51</sup> coupled with the local regional approach, as evidenced by the founding of the RCPA, and the existing countywide *Community Climate Action Plan*, offer an unique opportunity to use the updating of the regional climate action plan as a means to coordinate strategies for general plans and zoning. Additional resources include the California Air Resources Board's (ARB) Local Government Toolkit,<sup>52</sup> and the ARB Local Actions for Climate Change Website.<sup>53</sup>

**Case Studies:**

- The Marin County Sustainability Program received the National Planning Excellence Award for Implementation in 2008 from the American Planning Association for its ground-breaking strategies for GHG reduction.<sup>54</sup> The County's progressive strategies for clean energy and GHG reduction are incorporated in its General Plan (i.e. *Marin Countywide Plan*), which includes features such as expedited permitting and fee waivers for projects that exceed state and local building standards, solar installations that meet 75 percent of the project energy needs, and projects that meet green building checklist requirements; technical assistance; green building resource library; trainings for staff, building professionals, and the public; and coordination with other municipalities.<sup>55</sup>
- In June 2009, the California Air Pollution Control Officers Association (CAPCOA) published *Model Policies for Greenhouse Gases in General Plans*, which provides recommendations on General Plan options for clean energy and GHG reduction gleaned from a survey of best practices in a variety of jurisdictions. The report provides background on environmental and legislative conditions and a list of General Plan element and provision examples for local government consideration.

**Constraints:** The current economic recession has limited the resources and staff available to explore new planning strategies; however, regional collaboration on this issue could minimize the cost to individual governments and result in regional approaches that affect the full greenhouse gas emissions picture (e.g., transportation, electricity/natural gas use, water efficiency) and implement consistent best practices.

**Tasks:** Convene discussion of General Plan opportunities through the already scheduled Sonoma County Planning Directors Monthly Meeting code update process and coordinate with discussion regarding updating the countywide climate action plan for CEQA-compliance and local government adoption.

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<sup>51</sup> Amended CEQA guidelines, effective March 18, 2010,

[http://ceres.ca.gov/ceqa/docs/Adopted\\_and\\_Transmitted\\_Text\\_of\\_SB97\\_CEQA\\_Guidelines\\_Amendments.pdf](http://ceres.ca.gov/ceqa/docs/Adopted_and_Transmitted_Text_of_SB97_CEQA_Guidelines_Amendments.pdf)

<sup>52</sup> California Air Resources Board, Local Government Toolkit, <http://www.coolcalifornia.org/local-government>

<sup>53</sup> California Air Resources Board, Local Actions for Climate Change Website,

<http://www.arb.ca.gov/cc/localaction/localaction.htm>

<sup>54</sup> YouTube video on Marin County Sustainability Program: <http://www.youtube.com/watch?v=39XOb53forM&feature=user>

<sup>55</sup> *Marin Countywide Plan*, <http://www.co.marin.ca.us/depts/CD/main/comdev/ADVANCE/CWP/INDEX.cfm>

## Financing/Incentives

### 2 — Redevelopment, Community Development, and Enterprise Funds and Energy Service Company Option

**Market Barrier:** For public and private property owners, the cost of solar and energy efficiency improvements is frequently the most significant barrier to taking action. Rebates and tax benefits reduce the overall cost and financing these efforts spreads the cost over time.

**Recommendation:** Identify local government community development/redevelopment funds as well as public utility (water, sewer and waste management) enterprise funds to underwrite solar and energy efficiency projects and identify opportunities to use the Energy Service Company (ESCO) model in which an ESCo develops, installs and monitors, and provides financing for municipal projects, and assumes the risk that the energy savings and reduced maintenance costs will be sufficient to repay the capital improvement financing.<sup>56</sup>

**Benefits:** The benefits of additional funding sources include:

- Public and private property improvements: Redevelopment Agencies can use their funding sources for energy efficiency and renewable energy projects for both public and private properties. ESCo can also be used for public and private properties.
- Not General Fund money: The use of Redevelopment, Community Development, and enterprise funds does not affect local government General Funds, which are severely limited by current economic conditions. ESCos also allow governments to finance projects without using General Fund money.
- Funds produce energy cost savings: Enterprise funds and ESCo vendors can be used for projects that provide solar energy sources for their operations and improve efficiency, resulting in energy cost savings and stabilizing future energy costs.

**Resources:** Community development/redevelopment agency and enterprise funds for solar and energy efficiency projects are available to local governments. Redevelopment Agencies can use property tax increment revenues and Tax Allocation Bond proceeds for public and private projects within designated redevelopment zones and affordable housing projects within jurisdictional boundaries. Enterprise funds come from user fees for services like water, sewer, and waste management. Projects that maintain or improve these services can use enterprise funds or revenue bonds guaranteed by these user fees. ESCo financing is typically used by municipal agencies and districts and is dependent on a well-designed project scope to yield energy savings equal to or larger than the financing costs.

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<sup>56</sup> National Association of Energy Service Companies: <http://www.naesco.org/resources/esco.htm>

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**Background/Case Studies:**

- The City of Sonoma used their Community Development Agency as a source of funding for its Solar Energy Business Loan Program,<sup>57</sup> which provides commercial property owners within their redevelopment district a loan of up to \$50,000 for the installation of a solar electric system, and its Energy Efficiency Matching Funds Program,<sup>58</sup> which provides business and commercial property owners with up to \$1,000 dollar-for-dollar matching grant for efficiency improvements such as lighting upgrades, insulation, weatherization, energy management systems, and HVAC upgrades.
- The City of Santa Rosa and the Sonoma County Water Agency (SCWA) use their enterprise funds for solar and energy efficiency projects. The City of Santa Rosa Utilities Department began implementing solar energy in 2004 at the Laguna Treatment Plant with a 21kW solar panel system. This array generates approximately 33,400 kWh of energy annually that helps offset the operational energy use of the plant. The Sonoma County Water Agency has installed energy efficiency improvements including window film application and lighting retrofits. The window film application has a lifetime of 15 years and saves SCWA approximately 30,000 kWh annually. More than 600 lighting fixtures were retrofitted and provides SCWA approximately 62,000 kWh in annual savings.
- The City of Sebastopol used water and sewer enterprise funds to finance solar projects that served the wastewater collection system and water distribution system. In addition, Redevelopment Project Funds were used to finance a portion of the installation cost for solar on the Police Station and Redevelopment Affordable Housing Funds were used to finance the installation of solar on two affordable housing projects, totaling 65 housing units.
- The County of Sonoma the Energy Service Company model to implement is Comprehensive Energy Project (CEP), which is a component of the County's municipal Climate Protection Action Plan. The CEP is being implemented as a design/build project under the authority of Government Code Section 4217.10 *et. seq.*, which allows public agencies to award energy saving projects to Energy Services Companies (ESCO) on the basis of experience, type of technology employed, cost, or other relevant considerations. The CEP includes lighting retrofits for 20 buildings, replacement or reconstruction of heating, ventilation, and air-conditioning equipment for four buildings, replacement of chillers and other equipment at the Central Mechanical Plant, water reduction retrofit of several large County facilities, and installation of a 1.4 megawatt fuel cell power generation plant with heat recovery.

**Constraints:** Use of Redevelopment Project Funds requires that the location of specific projects be within the community's redevelopment zones. Projects funded by Redevelopment Affordable Housing funds can be located anywhere within the jurisdiction. An Implementation Plan containing specific goals and objectives for redevelopment projects, and estimated expenditures must be adopted every five

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<sup>57</sup> City of Sonoma Solar Energy Business Loan Program,  
<http://www.sonomacity.org/uploads/Econ%20Devel/CDA%20Guidelines%20Nov08Solar.pdf>

<sup>58</sup> City of Sonoma Energy Efficiency Matching Funds Program,  
[http://www.sonomacity.org/uploads/Econ%20Devel/CDA\\_Guidelines\\_Oct08Energy.pdf](http://www.sonomacity.org/uploads/Econ%20Devel/CDA_Guidelines_Oct08Energy.pdf)

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years. In order to use redevelopment funds for energy efficiency/renewable energy projects, they must be included as a component of the Five-Year Implementation Plan. Uses of enterprise funds are limited to operations and projects of that enterprise or utility (e.g., water, sewer, and airport).

**Tasks:** In order to use redevelopment funds, language such as, “programs for energy efficiency improvements including but not limited to photovoltaic and solar thermal systems, and upgraded utility systems” should be amended to the Redevelopment Five-Year Implementation Plan at the earliest opportunity.

## **Education**

### **3 — Training for Government Staff/Elected Officials and Solar/Efficiency Vendors**

**Market Barrier:** Solar power technologies and energy efficiency measures represent the emergence of a new marketplace for green services. Along with that new marketplace come technologies and techniques unique to these industries and their ultimate product: clean energy. Many of the newest and most effective innovations in solar and efficiency go beyond State code requirements. Building officials are increasingly short-staffed and over-worked, yet market-generated technologies/techniques are growing every day. On the other hand, solar and efficiency vendors are also pressed to track updates in State codes that affect their projects. In this accelerated environment, both vendors and code officials need support to keep abreast of industry and code developments and minimize in-field instruction to remediate installation problems as they work together to complete successful projects. Mutual training opportunities should be pursued whenever possible.

#### **Recommendations:**

**Government Staff/Elected Officials:** Establish regular opportunities to educate and train municipal staff and elected officials on energy efficiency and renewable energy:

- Provide ongoing educational programs for government elected officials on energy polices, regulations, and funding opportunities.
- Train building permit staff in current solar and energy efficiency techniques and regulations so they can be frontline representatives for property owners seeking to remodel, retrofit, or build new structures.

**Solar/Efficiency Vendors:** Encourage local clean energy vendor communities to participate in industry certification programs that maximize the quality of local service delivery, reduce delays in project permitting and inspection completion, and promote consumer confidence.

- Support and partner with local clean energy industry trade groups to encourage widespread vendor participation in recognized certification programs.
- Support local clean energy vendor participation in the Countywide Retrofit/Renewables Program, which includes vendor protocols and certification guidelines.

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**Co-Training Strategy:** Training/certification programs and industry update workshops provide an opportunity for building code officials, solar/efficiency vendors, and other building trade professionals to learn together and share knowledge.

- Provide co-training opportunities for building officials and industry vendors to encourage better understanding of the needs of the other party, facilitate effective working relationships, reduce hold ups, and find opportunities to save time and expedite projects.

**Benefits:** Training and education programs have both immediate and ongoing benefits, including:

- Time-efficient inspection of solar/energy efficiency projects: Building officials will be aware of current solar and efficiency regulations and technologies when reviewing projects. Solar and efficiency vendors will be aware of new code and project inspection issues and opportunities to be proactive in project implementation.
- Informed assessment of clean energy opportunities: Elected officials can ensure that solar and energy efficiency are considered in all projects and programs coming to their attention.
- Informed constituents: Elected and building official awareness of solar/energy efficiency resources and concepts offers additional opportunities for them to share key ideas and benefits with the public during the regular course of business, directly benefiting the entire community and the environment. Solar/efficiency vendor awareness of code and inspection issues offers additional opportunities for them to ensure timely project approvals and foster consumer confidence in high quality project results.
- Maximize emerging technologies: Training for government staff and solar/efficiency vendors in new technologies and solar/energy-efficiency products ensures that projects use the most efficient approach and have the greatest benefits. Training in new building code requirements ensures solar/efficiency vendors can reduce costs associated with delays in project approval and permitting caused by code issues.
- Building partnership between building officials and local vendors: When building officials and solar/efficiency vendors participate together in training courses, relationships are created that help build trust between these two groups.

**Resources:** Training opportunities for elected officials, building officials, and vendors can be coordinated through several local entities, including REACO, RCPA, local governments, and Solar Sonoma County. In addition, local, state, and national organizations frequently offer Webinars and other internet-based information and training, as well as traditional classroom-based solar/energy efficiency training programs, conferences, and workshops.

**Case Studies:**

- On January 25, 2010, the City of Santa Rosa's Solar America Cities program, Redwood Empire Association of Code Officials (REACO), and the Interstate Renewable Energy Council (IREC) hosted a

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Solar Domestic Thermal Inspection Course for code officials and solar thermal vendors. Underwritten by a grant from the U.S. Department of Energy's IREC program, the course provided an overview of system theory and building, mechanical, plumbing, and energy conservation codes.

- On November 10, 2009, Solar Sonoma County hosted a Solar Permitting Symposium for building official and solar vendors that featured presentations from building officials on current and future regulations, examples of common installation mistakes found during compliance inspections, and group brainstorm on solutions for common implementation problems.
- San Jose, California, (a Solar America City) hosted a Regional Renewable Energy Permitting Symposium that attracted 120 building, code, fire, and permitting leaders from 22 Bay Area cities and solar representatives to improve the solar permitting process.<sup>59</sup>

***Building Officials and Solar/Efficiency Vendors:*** There are a variety of training resources for government and industry participants for residential and commercial properties. An important cornerstone of the clean energy industry is the California Energy Commission's Home Energy Rating System (HERS) for whole-house raters, which provides property owners with a clean energy plan (i.e., energy analysis) that supports high quality installation of energy efficiency features in California homes.<sup>60</sup> Technical and building code training is also provided by the code official associations, solar industry, building performance contractor industry, PG&E's Public Goods program, and the Redwood Empire Association of Code Officials, which has hosted two regional trainings and is planning additional training events.<sup>61</sup>

Industry-specific technical as well as building code training programs and education opportunities are provided by:

- **Solar:** CALSEIA is the California Solar Energy Industries Association. It supports the widespread adoption of solar thermal and solar electric systems by educating consumers and supporting solar legislation. This organization has members that are manufacturers, contractors, utilities, educational organizations and local governments. Its goals include legislation to help achieve an open and competitive market, create and/or modify codes, standards and regulations to promote safety, reliability, durability, and reduce costs and improve construction efficiency.<sup>62</sup>
- **Solar:** North American Board of Certified Energy Practitioners (NABCEP) is a voluntary board of renewable energy stakeholder representatives from the solar industry, NABCEP certificants, renewable energy organizations, policy makers, educational groups, and the trades. NABCEP provides voluntary training/certification programs for solar electric and solar thermal to promote renewable energy, support solar vendors, promote worker safety and skill, and increase consumer confidence.<sup>63</sup>

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<sup>59</sup> <http://www.sanjoseca.gov/esd/natural-energy-resources/RenewableEnergySymposiumRegistration.htm>

<sup>60</sup> [www.energy.ca.gov/HERS/index.html](http://www.energy.ca.gov/HERS/index.html)

<sup>61</sup> For information of REACO training events, visit: <http://www.reaco.org/education.htm>

<sup>62</sup> [www.calseia.org](http://www.calseia.org)

<sup>63</sup> <http://www.nabcep.org/certification/the-need-for-certification>

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- **Solar:** The International Brotherhood of Electrical Workers (IBEW) has been a strong local supporter of solar energy efforts and provides training for installers of solar energy systems and is a partner in Solar Sonoma County.<sup>64</sup>
- **HERS:** CalCERTS, Inc. is a private organization approved by the California Energy Commission to provide 2008 Title 24, Part 6 Field Verification and Diagnostic Testing services and HERS II whole-house energy analysis services under the forthcoming HERS II program.<sup>65</sup>
- **HERS:** The California Home Energy Efficiency Rating System (CHEERS) has been approved by the Energy Commission to oversee HERS Raters providing 2008 Title 24, Part 6 Field Verification and Diagnostic Testing services and HERS II whole-house energy analysis services under the forthcoming HERS II program.<sup>66</sup>
- **HERS:** California Building Performance Contractors Association provides training and certification to HERS raters 2008 Title 24, Part 6 Field Verification and Diagnostic Testing services, HERS II whole-house energy analysis services under the forthcoming HERS II program, and home performance contracting with the Building Performance Institute's Home Performance with ENERGY STAR program.<sup>67</sup>
- **GreenPoint Rated:** Build It Green is a non-profit organization that works to accelerate the adoption of green building practices. Build It Green is the certification body for Certified Green Building Professional and GreenPoint Rated rater program.<sup>68</sup>
- **Public Good Training:** PG&E offers a wide range of solar and energy efficiency training opportunities for different audiences and education levels, both online and in the classroom.<sup>69</sup>
- **Building Code Training:** Training in California building codes and code compliance can be obtained through the California Association of Building Energy Consultants (CABEC)<sup>70</sup> and California Building Officials (CALBO).<sup>71</sup>

**Elected Officials:** Educational opportunities and Websites aimed at a non-technical audience are provided by several organizations, including:

- The US Department of Energy's website for information on energy efficiency and renewable energy technologies.<sup>72</sup>
- The US Environmental Protection Agency's Local Climate and Energy Program.<sup>73</sup>

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<sup>64</sup> [www.ibew.org](http://www.ibew.org)

<sup>65</sup> [www.calcerts.com](http://www.calcerts.com)

<sup>66</sup> [www.cheers.org](http://www.cheers.org)

<sup>67</sup> [www.cbpc.org](http://www.cbpc.org)

<sup>68</sup> [www.builditgreen.org](http://www.builditgreen.org)

<sup>69</sup> [www.pge.com/mybusiness/edusafety/training](http://www.pge.com/mybusiness/edusafety/training)

<sup>70</sup> <http://www.cabec.org/education.php>

<sup>71</sup> [http://www.calbo.org/industry\\_pro/default.aspx](http://www.calbo.org/industry_pro/default.aspx)

<sup>72</sup> [www.eere.energy.gov](http://www.eere.energy.gov)

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- The Database of State Incentives for Renewable Energy (DSIRE).<sup>74</sup>
- The California-based Center for Energy Efficiency and Renewable Technologies (CEERT).<sup>75</sup>
- Solar Sonoma County.<sup>76</sup>

Recognizing that elected leaders have less need for detailed training and greater time constraints, solar/energy efficiency educational opportunities can be most easily used if they are integrated into existing opportunities.

Solar Sonoma County provides local training and educational workshops and events for a range of participants. Organizations that may be able to co-host or provide training venues include:

- Sonoma County Regional Climate Protection Authority could provide ongoing education targeted to their Board of Directors, composed of elected representatives from all Sonoma County jurisdictions, at their monthly meetings.
- The Mayors and Council Members Association has bimonthly meetings and can organize special study sessions for all County elected officials.
- The Climate Protection: Everybody Profits Conference, organized by the Climate Protection Campaign, is another ideal opportunity to include solar/energy efficiency information aimed at elected officials.
- The City Managers meeting is another monthly forum where discussion of these issues with senior governmental managers is available.

**Constraints:** An organized system to notify local government officials and staff about appropriate educational and training opportunities requires on-going staff time to set up and maintain notification lists, identify educational and training opportunities, and prepare and distribute the information. Local educational and training programs require funding for the people and other resources to plan and implement these events.

**Tasks:**

- Identify a host organization and ongoing funding for an education and training notification system. The mission of Solar Sonoma County makes it a good choice for operating an education and training notification system as well as a potential organizer of local events. The Sonoma County Regional Climate Protection Authority would be an ideal public agency to coordinate this project. Utilization of the City manager's group for notification of elected officials is also recommended.

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<sup>73</sup> [www.epa.gov/cleanenergy/energy-programs/state-and-local/local.html](http://www.epa.gov/cleanenergy/energy-programs/state-and-local/local.html)

<sup>74</sup> [www.dsireusa.org](http://www.dsireusa.org)

<sup>75</sup> [www.ceert.org](http://www.ceert.org)

<sup>76</sup> [www.solarsonomacounty.org](http://www.solarsonomacounty.org)

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- Set up and maintain notification lists of public officials and building permit staff, with separate lists for the type of educational or training event; (i.e., policy and funding for elected and/or other policy-oriented officials, and technical training for building permit staff).
- Track and identify educational and training opportunities, summarize and post on a Website and distribute the information via e-updates or a similar notification system.
- Develop and present specific topic workshops and training events as local training and educational needs are identified.

#### **4 — Education for Community**

**Market Barrier:** Solar and energy efficiency have been part of the community discussion since the 1973 energy crisis that challenged the societal belief in the invincibility of a fossil fuel–based economy and introduced the benefits of energy conservation and renewable energy sources. However, it would take another three decades and the emergence of climate change to position these technologies for widespread implementation. Today local solar and efficiency vendors are still the lead providers of property owner education, spending significant time providing a client with the information he/she needs to identify project goals and benefits and make a sound investment decision.<sup>77</sup> While their effort is supported by education campaigns sponsored by partners such as PG&E, Sonoma County Energy Watch, Sonoma County Energy Independence Program, and Solar Sonoma County, there is still a need to educate the community on the solar/efficiency benefits, technologies, and project planning in order to encourage the high participation levels needed to meet local solar energy generation and GHG reduction goals.

**Recommendation:** Identify opportunities for local government to (1) support the use of existing education channels or (2) support the creation of new initiatives to educate citizens about the economic, environmental, and community values of solar electric and thermal systems and energy efficiency upgrades to encourage property owner participation and reduce GHG emissions from buildings.

**Benefits:** Providing consistent and comprehensive community education on solar and efficiency will produce the following benefits:

- **Well-informed property owners:** Property owners and renters who understand the basic science and economics that lead to a successful solar/efficiency project will be better equipped to identify their project goals and navigate project implementation.
- **Create market demand for high participation:** By allowing the use of its existing communication channels and collaborating on new education initiatives, local government can encourage responsible implementation of solar and efficiency projects and community interest in solar and efficiency improvements.

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<sup>77</sup> Local vendors report they can spend from one to two or more hours (depending on the property owner’s prior familiarity with clean energy technologies) educating potential clients about the basic principles and benefits of solar and energy efficiency upgrades.

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- Increase tax revenue through solar/efficiency-related economic activity and job creation: For the next two to three years (2010–2012) federal stimulus funding will support job creation and GHG reduction efforts to initiate a local economic recovery.

**Community Education — Build on Existing Education Channels**

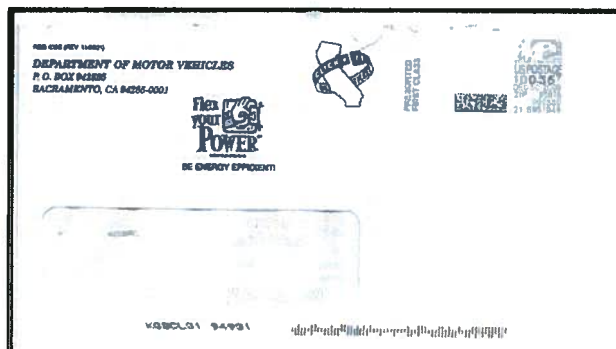
**Recommendation:** Use existing educational channels to outreach to the community to increase installation of energy efficiency and solar energy projects.

**Benefits:** The benefits of using existing educational resources include:

- Cost-effective: Adding information about energy efficiency and solar energy to existing outreach tools can be accomplished with little or no additional cost.
- Diverse messaging media: There are many current educational tools, offering a variety of contact points with the public, increasing the possibility of contacts with the public.
- Frequency: Current communications with the public are frequent, multiplying the likelihood that this information will be noticed.

**Resources:** Existing communication tools to provide solar and energy efficiency information to Sonoma County residents and businesses include:

- Utility bills (water, energy, garbage) — Web and/or phone contact information can be printed directly on the bill, with more detailed information provided using inserts.
- “Bug ads” — Print bug ads with web contact information on the envelopes used for other agency business (see below).



- City newsletters — Many communities send newsletters to residents. Solar and efficiency information should be regularly highlighted in existing newsletters.
- Tax bills — Web and/or phone contact information can be printed directly on the bill, with more detailed information provided using inserts.
- Building department displays — Educational and literature displays in city hall and building department lobbies, libraries, and other public offices.

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- City/County Websites — Provide links to the forthcoming Web portal that will be co-hosted by Sonoma County Energy Independence Program and the Countywide Retrofit/Renewables Program, which will include a roster of energy efficiency and solar information, access to energy analysis services, roster of efficiency and solar vendors, and access to project financing resources such as SCEIP, rebates, incentives, and tax credits.
- Demonstrate examples of solar and energy efficiency projects using public buildings or selected private facilities and publicize with press releases to local newspapers.
- Partner with the Countywide Retrofit/Renewables Program and SCEIP to circulate solar and efficiency information to local organizations to include in their newsletters and on their Websites, including community service clubs (e.g., Kiwanis, Lions, Rotary, etc.), trade and business organizations (e.g., SEIU, IBEW, Teamsters, North Coast Builders Exchange, Chambers of Commerce, Farm Bureau, North Bay Association of Realtors, Sonoma County Alliance, GoLocal, etc.), environmental organizations (e.g., Climate Protection Campaign, Sierra Club, Sonoma County Conservation Council, Sonoma County Conservation Action, Greenbelt Alliance, Sustainable Sonoma County, etc.), and Sonoma County religious organizations.
- Support and partner with the Countywide Retrofit/Renewables Program and SCEIP to provide a speakers bureau service for local community groups providing presentations to the groups such as those listed above.
- Provide government staff in partnership with NGO staff such as SSC to answer questions about solar and energy efficiency by tabling at large public events such as the County Fair, Farmers Markets, Santa Rosa Downtown Market, etc.
- Include Web links to solar and energy efficiency information in government emails with notices about upcoming meetings.
- Put Web link to Countywide Retrofit/Renewables Program and SCEIP as a footer on staff/official emails.
- Create regular press releases to local newspapers and magazines (*Press Democrat, Business Journal, The Bohemian*, etc.) that highlight different solar and energy efficiency benefits or programs such as the Sonoma County Energy Independence Program, the Countywide Retrofit/Renewables Program, Sonoma County Regional Climate Protection Authority, and other local education efforts.
- Disseminate education and information through online marketing and social media communication channels.

**Background/Case Studies:** The communication tools listed above, although focused on other conservation issues, have been used for many years by the Sonoma County Waste Management

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Agency,<sup>78</sup> the Sonoma County Water Agency,<sup>79</sup> and the Santa Rosa Utilities Department.<sup>80</sup> They have a wealth of experience in these methods and should be used as a resource.

**Constraints:** Implementing the above opportunities to update existing communication methods for community outreach may require some staff time and additional funding. Coordinating these strategies through the Sonoma County Regional Climate Protection Authority and partnering with existing regional and nonprofit groups offers opportunities to minimize funding and staff time demands.

**Tasks:** Coordinate with the Sonoma County Regional Climate Protection Authority, Countywide Retrofit/Renewables Program, SCEIP, and other local groups such as Solar Sonoma County to identify the best means for obtaining regional information resources and implementing their dissemination through existing communication channels.

### ***New Education Initiatives***

**Recommendation:** Seek new opportunities to expand community education opportunities.

**Case Studies:** A survey of community education initiatives from the Solar America Cities program yielded the following options for consideration; many of these initiatives are implemented through public/private /nonprofit partnerships:

- **Door-to-door neighborhood education programs:** Defined by the California Energy Commission as a Tier-1 initiative under the California Comprehensive Residential Building Retrofit Program, these programs typically employ entry-level people with limited training or neighborhood/community organizations in door-to-door campaigns to provide simple energy efficiency measures and education. They provide immediate assistance installing compact fluorescent bulbs, low-flow showerheads and faucet aerators, and identify appliances that are good candidates for replacement with a high efficiency model. In addition, they provide advice on behavioral measures such as turning the thermal heater to 120°F, properly operating windows for ventilation, and using shades to keep heat in during the winter and out during the summer. Examples include:
  - The Neighborhood Collaboration Program in Denver, Colorado, (a Solar America City) partners with the Mile High Youth Corp to provide outreach to low-income households that includes porch light upgrades, forms to cancel junk mail, a checklist energy audit, and referral to the local Weatherization Assistance Program provider for eligible households.<sup>81</sup>
  - In March 2010, the City of Sebastopol and the North Bay Association of Realtors launched a door-to-door campaign to provide residences and businesses with information and coupons for water and energy conservation measures from PG&E, the Sonoma County Energy Independence Program, and other resources.

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<sup>78</sup> Sonoma County Waste Management Agency, <http://www.recyclenow.org/>

<sup>79</sup> Sonoma County Water Agency, <http://www.scwa.ca.gov/index.php>

<sup>80</sup> City of Santa Rosa, <http://www.ci.santa-rosa.ca.us/departments/utilities/Pages/default.aspx>

<sup>81</sup> Denver's Neighborhood Collaborative: [www.groundworkdenver.org/neighborhood-collaborative.htm](http://www.groundworkdenver.org/neighborhood-collaborative.htm)

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- Tours of buildings with solar systems and efficiency upgrades: Two Solar America Cities (i.e., Portland, Oregon, and Seattle, Washington) host annual tours of homes and businesses that have installed solar systems and efficiency measures. They participate in the National Solar Tour program, which provides guidance on how to plan and implement public tours of improved properties for community education.<sup>82</sup> During the tours, visitors can speak with the building owners about their solar system performance, energy-savings upgrades, use of sustainable principles in building design, and green building materials. Solar Oregon, a public/private partnership based in Portland, Oregon, also coordinates the Oregon Green and Solar Tour, a tour program providing 13 tours in five communities across Oregon. In addition, Solar Oregon also hosts a Goal Net Zero Tour in May featuring one green home under construction, one recently built Net Zero home, and one vintage home in the early stages of a Net Zero renovation.<sup>83</sup> In addition, Build It Green, the nonprofit organization promoting green new construction and remodeling practices and standards, sponsors a Bay Area-wide GreenPoint Showcase Tour featured GreenPoint Rated homes.<sup>84</sup>
- Property owner classes in solar basics: Solar Oregon is a non-profit membership organization providing public education and community outreach to encourage Oregonians to choose solar energy and a partner with the Oregon Department of Energy and City of Portland in the Solar Now project.<sup>85</sup> Solar Oregon offers a five course curriculum for property owners that includes: Residential Basics of Going Solar, Commercial Basics of Going Solar, How to Buy a Solar Electric System, How to Buy a Solar Thermal System, and Passive Solar Building Design.
- Web portal and GIS<sup>86</sup> map of solar systems: Eleven of the 25 Solar America Cities have or are in the process of developing geographical information system (GIS) maps of their communities that show where solar systems have been installed and include the ability to click on the colored dot indicating a solar installation to view a photo and other information about the project. Solar Sonoma County, the County of Sonoma, and the Sonoma County Energy Independence Program are partnering on a GIS mapping feature similar to the one provided on the Sonoma County Energy Action (SCEA) Web site.<sup>87</sup> Local governments can support the countywide project by informing property owners with retrofit projects about the opportunity to participate in the local GIS map project and support the project by providing contact information for property owners with new solar and energy efficiency projects.
- Neighborhood networks: The Empowerment Institute sponsors the Cool America program to organize education and behavior change at the neighborhood level. Local governments can partner with existing neighborhood associations to sponsor “Carbon Reducing Teams” through efforts such

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<sup>82</sup> The National Solar Tour program is sponsored by the American Solar Energy Society, a nonprofit dedicated to “inspiring an era of energy innovation and speed the transition to a sustainable energy economy,” NST anticipates the October 2010 national tour will host 160,000 visitors and include 5,000 buildings in 3,200 communities nationwide,

[http://ases.org/index.php?option=com\\_content&view=article&id=158&Itemid=16](http://ases.org/index.php?option=com_content&view=article&id=158&Itemid=16)

<sup>83</sup> Solar Oregon Net Zero Tour: [www.solaroregon.org/tours/goal-net-zero-home-tour](http://www.solaroregon.org/tours/goal-net-zero-home-tour)

<sup>84</sup> 2009 GreenPoint Showcase Tour information: <http://www.builditgreen.org/greenpoint-showcase/>

<sup>85</sup> Solar Now: <http://www.solarnoworegon.org/about.html>

<sup>86</sup> Geographical information system (GIS)

<sup>87</sup> Sonoma County Energy Action: [www.sonomacountyenergyaction.org](http://www.sonomacountyenergyaction.org)

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as the Cool America program, which uses the book, *Low Carbon Diet: A 30-Day Program to Lose 5,000 Pounds*, as a teaching tool to help neighbors form carbon reducing teams to learn how to reduce their energy use and explore renewable energy generation. The program also includes resources to host two-to-four-hour Global Warming Café workshops for large-group dialogues about ways to empower the community to become part of the climate protection solution.<sup>88</sup>

**Suggestions:** The Solar Sonoma County community also proposed several new ideas:

- Net zero holiday lights contest: Sponsoring a “Net Zero Holiday Lights” or “No Coal in Your Stocking” contest featuring homes and businesses with holiday displays that use LED lights, have offset their display energy use, or are powered by solar generation.
- Clean energy leader awards: Establishing a community Clean Energy Leader Award to recognize property owners who have made significant reductions in their fossil fuel energy use through efficiency and solar. Such a program could be countywide with awards granted to the top two-to-three clean energy candidates from each community. The criteria for selection would be a per-capita clean energy use (or carbon footprint) calculation that would accommodate improvements to the building and occupant behavior. On a countywide basis, the property owner who achieves the lowest per-capita footprint would receive a special award and special acknowledgement would go to his/her community.
- Labeling program for retrofitted/solarized homes: Local governments could collaborate and partner with the Sonoma County Retrofit/Renewables Program and the Sonoma County Energy Independence Program to provide a Clean Energy signage program that identifies properties in the community that have undergone an efficiency/solar upgrade. The signs could, where applicable, include energy use ratings from HERS II and GreenPoint Rated as well as the City or County insignia and be designed to be displayed in a window or on the exterior of the building.

**Constraints:** Because of current economic conditions that limit government resources and staff time, local governments could partner in such educational projects with local programs such as the Sonoma County Energy Independence Program, Countywide Retrofit/Renewables Program, or Regional Climate Protection Authority and nonprofits such as Solar Sonoma County, Climate Protection Campaign, Efficiency First, Build It Green, and Redwood Empire Green Building Council.

**Tasks:** Identify appropriate new outreach initiatives, seek partners, identify existing community outreach resources that can be applied to new initiatives, and seek approval of local jurisdictions for new program concepts. .

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<sup>88</sup> The Cool America program is sponsored by the Empowerment Institute, which is dedicated to empowering communities to achieve measurable behavior change at the community and organizational level, [http://www.empowermentinstitute.net/lcd/lcd\\_files/Cool\\_America\\_Flier\\_color\\_sm.pdf](http://www.empowermentinstitute.net/lcd/lcd_files/Cool_America_Flier_color_sm.pdf)

## Market Transformation

### 5 — Clean Energy Advocate Program

**Market Barrier:** Property owners planning to implement a deep-energy reduction project combining efficiency measures, water conservation, and solar energy generation are challenged to find an integrated source for education about the process and available technologies and opportunities, as well as financing options. The time required to research options, talk to vendors and finance sources, and determine a project strategy can be significant and become a barrier to project completion.

The City of Santa Rosa has been awarded a Solar America Cities Special Projects grant to establish a countywide Clean Energy Advocate Program (CEA) that will provide an independent non-commercial advocate to help property owners navigate the planning and implementation of deep energy retrofit projects, combining energy and water efficiency and solar energy generation.<sup>89</sup> The program targets residential and small business property owners.

The goals of the CEA program are to (1) provide an independent advocate to educate property owners about project planning, financing, and implementation as well as opportunities to achieve energy savings through occupant behavior, (2) increase the number of property owners who install solar electric and solar thermal systems, (3) significantly improve the outcome and experience of property owners who install solar systems, (4) increase employment in the renewable energy and efficiency sectors of the County, and (5) help local governments and communities meet local and State greenhouse gas reduction targets. In addition, CEA will also support the Solar Sonoma County goal to install 25 megawatts of new solar generation by 2011.

**Recommendation:** Support and promote the new countywide Clean Energy Advocate program and assist in identification of program candidates.

The CEA program objectives are:

- Educate individual property owners and answer questions from project start to finish.
- Help property owners understand project scope and loading order choices to maximize project results.
- Help property owners obtain a financing package that provides optimal cost-effectiveness.
- Help property owners coordinate with market vendors.
- Support vendor accreditation/certification.
- Support collection of pre- and post-project energy use data to track job performance and GHG reductions.

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<sup>89</sup> Interstate Energy Renewable Council press release on the City of Santa Rosa's Clean Energy Advocate Program: <http://irecusa.org/2009/11/solar-america-city-santa-rosas-clean-energy-advocate/>

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- Educate the public on efficiency/solar retrofitting.
- Collaborate with the Sonoma County Energy Independence Program and the Countywide Retrofit/Renewables Program to align market transformation efforts and leverage existing resources for property owner benefit.

**Benefits:** The CEA program is designed to provide the following benefits to property owners and the community:

- Promote high levels of clean energy retrofit participation: By providing non-commercial education about the solar and efficiency retrofit process, the CEA will streamline the property owner education process, support identification of property owner project goals, and reduce the education investment required of market place vendors. In addition, the CEA will support and align with the community education efforts of the Countywide Retrofit/Renewables Program.
- The CEA program will be implemented countywide: The CEA model will serve all 10 jurisdictions within the county and support consistent community education.
- Streamlined program that provides solutions to practical problems: The CEA program will be designed considering stakeholder input to ensure it provides the right mixture of education and practical problem solving assistance to support successful projects.
- Online project analysis and tracking tools for CEA participants: In collaboration with the local/regional GIS project mapping project, the Sonoma County Energy Independence Program, and the Countywide Retrofit/Renewables Program's development of a centralized web portal, the CEA will contribute online resources for tracking project progress and GHG reduction results.
- Support climate protection goals for local government general plans: The CEA program will support long-term GHG reduction strategies for local government by supporting the integration of energy and water efficiency with solar electric and solar thermal technologies to demonstrate the deep energy reduction potential of the efficiency/solar model.

**Resources:** The CEA will work in partnership with Solar Sonoma County, the Sonoma County Energy Independence Program, and the Countywide Retrofit/Renewables Program to increase the adoption of deep energy retrofitting in Sonoma County.

**Case Studies:** Three Solar America Cities have piloted similar programs upon which the CEA was modeled:

- Solar Now, Portland, Oregon: The Solar Now program provides a series of property owner classes in the basics of solar electric and solar thermal systems, community presentations on solar, a

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contractor referral service, solar home tours, community event outreach, and an monthly e-newsletter for property owners.<sup>90</sup>

- MadiSUN Solar Agent, Madison, Wisconsin: The MadiSUN Solar Agent program provides commercial property owners with bundled packages of solar financing rebates and incentives and a free solar consultation service that helps property owners evaluate solar technology, architectural options, explain permit and zoning issues and how to deal with them, assist with obtaining project quotes, provide a list of local installers, assist with applying for solar funding, and provide assistance during the installer hiring process.<sup>91</sup>
- SmartSolar, Berkeley, California: Launched in April 2009, the SmartSolar program provides free solar energy consulting services from the City of Berkeley and its partner the Community Energy Services Corporation.<sup>92</sup> The program helps property owners understand and adopt energy efficiency and solar technologies through education on available technologies and assistance with project planning, cost assessment, and financing. The program uses the Berkeley Solar Map to assist with solar capacity assessments.<sup>93</sup>

## **6 — Clearinghouse for Request-for-Bids**

**Market Barrier:** Public agencies and private projects lack a single, convenient, easily accessible central location for posting solar and energy efficiency project opportunities in Sonoma County, forcing vendors to proactively use various information sources (e.g., Web, newspaper, trade magazines, phone calls) at multiple locations to find this information.

**Recommendation:** Establish a central Web-based clearinghouse to list requests for proposals (RFPs) and construction bidding opportunities for solar electric, solar thermal, and energy efficiency projects in Sonoma County.

**Benefits:** A central location for listing solar and efficiency and solar RFPs has several benefits, including;

- Convenient access to information: Vendors will be able to rapidly and easily check for new projects that they can consider bidding on.
- Projects will be presented to a range of vendors: Project developers and local governments will be able to present their projects to a large and diverse audience of potential contractors, helping match projects to the appropriate vendor.
- Easy and timely identification of projects: Both vendors and project promoters will be able to expedite the solicitation and response time for new projects.

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<sup>90</sup> Solar Now workshops: <http://www.solaroregon.org/workshops>

<sup>91</sup> City of Madison, Wisconsin; MadiSUN Solar Agent Program, <http://www.cityofmadison.com/Sustainability/City/MadiSUN/businesses.cfm>

<sup>92</sup> City of Berkeley SmartSolar Program, <http://www.cityofberkeley.info/ContentPrint.aspx?id=38066>

<sup>93</sup> City of Berkeley Solar Map: [http://berkeley.solarmap.org/solarmap\\_v4.html](http://berkeley.solarmap.org/solarmap_v4.html)

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- **Open competition:** Presenting projects to a large audience will help ensure equitable business opportunities for local vendors as well as optimum pricing and best value .

**Resources:** The Web now provides an appropriate platform to host an easy access to solar and energy efficiency project opportunities and links to detailed information about projects.

**Background/Case Studies:** A similar service is offered by the North Coast Builders Exchange (NCBE), which is a member-operated, not-for-profit association serving the construction industry primarily in Sonoma, Mendocino, and Lake counties. The NCBE provides members with detailed information on construction projects throughout the North Coast area for which full plans and specs are in NCBE plan rooms, as well as listings of bid results, building permits, projects in the pipeline, legal notices, and the ability to search for items within these categories on the Web.

However, this service includes a wide range of project types in addition to solar and energy efficiency projects, is based at the NCBE office location, and NCBE membership is required to access the information collected.

The NCBE has been in existence for over 50 years and is well known to local governments and project developers. When a public works department issues bid documents, copies are sent to the NCBE as a matter of course. There is no charge for listing a project. Project documents submitted in paper form are scanned by NCBE for Web-site retrieval by their members. Two full-time staff maintains this service, ensuring the information is timely and updated as necessary.

**Constraints:** The establishment of a central web-based clearinghouse for solar and energy efficiency projects will require a host organization and staffing to keep the information organized and updated. A single, impartial site that is widely advertised will provide the best results. Likely host organizations are the Sonoma County Regional Climate Protection Authority or Solar Sonoma County.

**Tasks:** Identify a host organization and ongoing funding for web-site operation. The mission and non-profit, independent status of Solar Sonoma County makes it a good choice for a possible host and operator. The Sonoma County Regional Climate Protection Authority (RCPA) would be an ideal agency to coordinate this project. Subtasks include: Identifying host organization and Web page format/functions, communicate RFP posting opportunities to local governments and public agencies, coordinate outreach or advertising campaign to invite participation by private companies and property owners, and maintain RFP Web presence to upload new projects and removed expired projects.

Such a centralized Web-base clearinghouse could be built on a contact management system that would allow each participating public entity or business to pay a small fee for the right to upload it RFP documents on a per-upload basis providing an affordable option to the current newspaper advertisement system.

## **Appendices**

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## **Appendix 1: Solar Implementation Plan History**

The Solar Implementation Plan (SIP) is designed to help local governments contribute to Solar Sonoma County's goal of installing 25 megawatts of new solar capacity by 2011 and maximize adoption of solar and efficiency through government leadership and marketplace transformation. The SIP was proposed under the U.S. Department of Energy Solar America Cities grant to identify opportunities for collaboration and partnership both among governments and with the private sector to develop regional programs for policies/regulations, financing/incentives, education, and market transformation that make the best use of government and private sector resources, prevent duplication of effort, invite participation from more community stakeholders, and standardize implementation processes (e.g., permitting, inspection) to support wide spread adoption of solar and efficiency upgrades.

The SIP development process included:

- **Research:** Research included project ideas in development by other Solar America Cities and research and interviews with all ten local governments to identify successful program models, current barriers to solar adoption, and possible solutions to address these barriers.
- **Solar Sonoma County Stakeholder/Membership Recommendations:** Proposed recommendations were collected from SSC's Working Group and Policy-Finance-Incentive, Solar Vendor, and Energy Efficiency committees.
- **Recommendation Selection:** More than 50 recommendations were compiled through the above research and input process. The SSC staff and advisors consolidated the list to the top 24 recommendations. These recommendations were submitted to the SSC Working Group, Board of Directors, and Advisory Board through a survey voting process that allowed the membership to assist with the final prioritization. The recommendations not highlighted in this report are provided in Appendix 2 and remain a source of additional opportunities for market transformation initiatives.
- **Final SIP Preparation:** The top six recommendations were augmented with additional research and consultation with local experts to provide a useful profile of each recommendation including the market barrier it is designed to remove, benefits, local resources, case studies, constraints, and tasks.

## **Appendix 2: Additional SIP Recommendations**

The following recommendations were generated during the stakeholder input phase and development of the *Solar Implementation Plan*, and represent additional opportunities for local government to support market transformation for clean energy adoption. The proposed recommendations below are listed in order of their popularity with the SSC stakeholders and membership as documented by the SIP voting process:

**ENERGY/SOLAR ANALYSIS TOOL LENDING LIBRARY:** Working as a coalition, local governments could establish a library of energy analysis tools, similar to the PG&E tool library, to provide local efficiency and solar start-ups with the ability to rent the equipment on an as needed basis until they are achieving a client volume that support purchasing their own equipment. This might be part of the Countywide Retrofit/Renewables Program.

**CLEAN ENERGY GRID:** Local governments could implement options for increasing the clean energy profile of the local grid including utility-scale solar development such as is recommended in Santa Rosa Green Building Advisory Committee report and *Sonoma County Community Climate Action Plan* (Community Choice Aggregation) through an existing regional entity such as the SCTA Regional Climate Protection Authority.

**SURROGATE ROOF SOLAR GENERATION PROGRAM:** Local governments could establish “Surrogate Roof” program modeled after the City of Sacramento (a Solar America City) in partnership with the Sacramento Municipal Utility District, where solar electric systems installed on large municipal roofs can carry extra capacity, the extra energy is sold to the energy market, and credit goes to City residents and businesses. This option would require a local municipal utility district or community choice aggregation body.

**LEVERAGE AMERICAN RECOVERY/REINVESTMENT ACT (ARRA) FUNDS FOR CLEAN ENERGY PROJECTS:** Use federal/state grants (e.g., ARRA, EECBP, State Energy Program) to provide financial incentives such as (1) increasing property owner rebates for solar and efficiency; (2) creating a local Sonoma County Energy Independence Program interest rate buy-down program; OR (3) participating in a mortgage buy-down program, such as the 14X program, which offers reduced mortgage interest rates contingent upon renovating or building to meet specific energy reduction targets. For existing homes, mortgage interest rates would be lowered by 1 percent if, with a minimum homeowner investment in efficiency upgrades and/or renewable energy systems (which is added into the new mortgage), the home is renovated to meet a minimum HERS 70 (or equivalent rating). For new homes, interest rates would be lowered by ½ percent for achieving a HERS 70 rating and 1 percent for achieving a HERS 50 rating.

**CLEAN RENEWABLE ENERGY BONDS — SUPPORT FOR SCHOOLS AND HOSPITALS:** School and hospital districts could work with local NGOs (e.g., Solar Sonoma County) to apply for California Renewable

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Energy Bond financing to promote the installation of solar systems on school campuses and hospital facilities.<sup>94</sup>

**MUNICIPAL ENERGY FUND TO BANK COST SAVINGS:** Local governments could explore establishing an “energy fund” financial model that collects the energy savings garnered from improvements to municipal operations and uses the funds for continued municipal efficiency projects.

**AFFORDABLE HOUSING ENERGY POLICY:** Local governments could collaborate with affordable housing organizations, the Sonoma County Housing Coalition, and other NGOs on developing a policy/program to integrate solar/efficiency features into the design for new affordable housing to lower energy costs for low-income households.

**NEW CONSTRUCTION SOLAR POLICY:** Local governments could require pre-plumbing and pre-wiring for solar thermal and solar electric for new building and development; For example, Cotati requires pre-plumbing for solar installations and has tree-trimming policies to preserve access to solar exposure in new construction building codes.<sup>95</sup>

**NATURAL GAS REDUCTION POLICY:** Local governments could implement policies and programs to encourage offsetting natural gas use with solar for heating and thermal for both municipal and private properties.

**SOLARIZED EMERGENCY PREPAREDNESS SYSTEM:** Local governments could establish solar-powered emergency preparedness support by installing solar electric systems on key energy points to maintain communications and services during emergency (e.g., City of New York solar emergency preparedness model). This idea could also be expanded to establish a cutoff switch program to solarized well pump operation during natural disasters for both municipal and private wells.

**MUNICIPAL SOLAR ANALYSIS SOFTWARE:** Local governments could collaborate with NGOs and industry professionals on developing a financial analysis software tool that will allow government staff to enter basic data on a proposed solar/efficiency project (some of which may be supplied by skilled subcontractors such as solar vendors or energy analysts) and generate apples-to-apples profiles of proposed municipal projects for internal decision making before going out to bid.

**CLEAN ENERGY INCENTIVE PROGRAM:** Local governments could establish a countywide incentive program (e.g., a Clean Energy Award Program) for all county property owners where a demonstrated energy use decrease would make them eligible for a rebate on the permitting and inspection fees incurred during their project.

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<sup>94</sup> In 2009, 44 projects in Sonoma County received 2009 CREBs allocations totaling \$38 million. As of March 2010, the RCPA is exploring the benefits of forming a bond pool structure for Sonoma County CREBs issuers to potentially minimize the transaction costs of individual bond issues, secure a competitive interest rate, reduce local government/public agency staff time expenses, and provide assistance with project design, economics and implementation to maximize the benefits of these solar and efficiency projects. Internal Revenue Service 2009 CREBs Allocation Schedule: <http://www.irs.gov/pub/irs-tege/ncrebs>

<sup>95</sup> See California Energy Commission’s New Solar Homes Partnership: <http://www.gosolarcalifornia.ca.gov/nshp/index.html>

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**POWER PURCHASE AGREEMENT CRITERIA:** Local governments could define and set criteria for Power Purchase Agreement projects that would facilitate the selection of properties where the solar installation will not exceed the building's realistic useful life.

**CLEAN ENERGY LEASING POLICY:** Local governments could participate in setting regional municipal standards for leasing property that include solar and efficiency upgrade requirements.

**CLEAN RENEWABLE ENERGY BONDS — PROJECT EVALUATIONS:** Local governments could work with relevant NGOs to create a low-cost solar evaluation program for municipal buildings that would provide a solar analysis of a target property before applying for CREBS to ensure proposal focuses on the best opportunities.