

# **Best Practices/Lessons Learned from Strategic Plan Support Activities**

2013-2015 Final Report

Funded by  
**Pacific Gas and Electric Company**  
under the auspices of the California Public Utilities Commission

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June 2016

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# I. Introduction

Since 2010, Pacific Gas and Electric Company (PG&E) has been working with local governments toward achieving the goals established in the California Long-term Energy Efficiency Strategic Plan. The Strategic Plan support element was authorized by CPUC in D. 09-09-047, and again in D. 12-05-015. For the period 2013-2015, PG&E further developed the Strategic Plan support element, as outlined in the Program Implementation Plan filed with the CPUC.

The following document highlights some of the best practices and lessons learned from the Strategic Plan support elements during the 2013-2015 period. This information was obtained through review of bi-annual Strategic Plan reports, feedback from local government partnership staff, and PG&E staff. This document is organized by strategic plan task. This document will be updated as tasks are completed and as more lessons learned/best practices become available.

## a. California Long-term Energy Efficiency Strategic Plan (CEESP)

California's Long-term Energy Efficiency Strategic Plan ("Strategic Plan") was developed to set the long-term vision for Energy Efficiency throughout the state. The Strategic Plan was divided into sectors, including five goals for the public sector. D.08-09-040 adopted the Strategic Plan and required PG&E and other IOUs to incorporate its strategies into energy efficiency program planning and implementation. D.09-09-047 directed the IOUs to develop a strategic plan menu of tasks for local governments to select from for Strategic Plan work. PG&E and other IOUs worked with the Energy Division and local governments to develop this menu of tasks, which was used as the basis for PG&E's continued Strategic Plan support activities.

## b. Strategic Plan Goals

The Strategic Plan set the following five goals for the public sector:

- **Strategic Plan Goal 1:** "Local governments lead adoption and implementation of "reach codes stronger than Title 24 on both mandatory and voluntary bases"
- **Strategic Plan Goal 2:** "Strong support from local governments for energy code compliance enforcement."
- **Strategic Plan Goal 3:** "Local Governments Lead by Example with their own Facilities and Energy Usage Practices"
- **Strategic Plan Goal 4:** "Local governments lead their communities with innovative programs for energy efficiency, sustainability and climate change"
- **Strategic Plan Goal 5:** "Local government energy efficiency expertise becomes widespread and typical."

# 1. Strategic Plan Menu # 1.1.1. – Reach Codes

*Adopt building energy codes more stringent than Title 24's requirements, using cost-effectiveness studies by Climate Zone done by the utilities; adopt one or two additional tiers of increasing stringency.*

## 1.1 Leveraging Benchmarking Ordinance Implementation

**Local Government Partnership:** San Francisco Energy Watch

**Project Purpose:** This item summarizes a suite of projects that enhanced or complemented San Francisco Department of Environment's implementation of the Existing Commercial Buildings Energy ordinance. The ordinance requires energy benchmarking annually, and an audit or retrocommissioning every 5 years.

**Project Scope and Components:** 1. Conduct pilot using remote energy audit tool for non-profit and faith-based organizations to comply with local audit requirement and develop resource projects for SFEW and AERCx programs. 2. Compile and analyze benchmarking results from all buildings that have complied to inform EE programs and strategies. 3. Conduct Existing Commercial Building Energy Performance Ordinance (ECBO) outreach linked to Energy Watch. 4. Use 5D GIS mapping to improve ECBO tracking, and to use ECBO data to inform other policies. (Note: These "components" are generally projects which were scoped, budgeted, and executed individually, but are rolled up into a single "Project" in this report to adhere to the required template, which in turn is consistent with the design of the Strategic Plan Menu reporting template. SF Department of Environment is concerned that inserting multiple square pegs into the single round hole inhibits effective communication.)

**Deliverables:**

- 2014: Apply energy audit tool(s) to 150 community benefit buildings.
- Upgrade energy audit reporting tool.
- Perform outreach to buildings subject to the ordinance.
- Develop 5D GIS model of San Francisco.

**Date Initiated:** May 2014

**Date Completed:** 12/31/2015

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**Original Budget (Cumulative):** \$415,900

**Final Cost (Cumulative):** Not specified

**Local Match Contribution:** Enforcement of the ordinance is funded from city resources, an investment of approximately \$195,000 per year, or \$292,000 over the period of these projects. In addition, these projects received matches totalling approximately

**Use of Unspent Funds:** NA

**Project Reimbursed for LG Staff Time (Y/N):** Y – LGP Implementer staff time.

### Best Practices

- Use energy policy/ordinances as a driver for outreach and program participation.
- Target supplemental services to organizations that serve the public good, including low-income communities.
- Improve efficiency of administration of benchmarking & audit ordinance, to improve potential impact.
- Complement mandatory energy benchmarking and audits with outreach to support energy efficiency project development.

### Lessons Learned

- Initiating a project dependent upon customer usage data is very challenging. Once data management relationships are established, level of effort to obtain or refresh data decreases.
- Geocoding meters to buildings requires high quality data from both the utility and a city; to improve efficiency of these projects, City of San Francisco is (at its own expense) re-developing a citywide 2D building footprint layer. We will proposal re-mapping meters to buildings once this layer is complete.
- Smart meter data was immature in 2014; many meters were installed throughout 2013, so less than 1 year of high-resolution usage history was available for most accounts.
- Given current remote analytics technology, sites with irregular usage patterns are not suitable for statistical inference techniques such as those employed by Retroficiency. (Unfortunately, community benefit organizations – such as houses of worship, community benefit food service, and animal shelters – were therefore unsuitable for this technique at this time.)
- As a result of the above lessons, it was not possible to perform remote analysis

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exclusively on community benefit buildings, and analysis was expanded to commercial buildings subject to the ECBO. However, simplified physics-based energy modeling (Autodesk Rapid Energy Model) and straightforward engineering analysis of 15-minute interval data were each found to be a viable means to identify efficiency opportunities for sites, but this required a different approach. Initial remote analytics can be performed *en masse* prior to enrollment, while physics-based modeling requires significant data about the asset in question, so is more suitable to be performed after enrollment.

- The US DOE Building Energy Data Exchange Specification (BEDES) is a useful tool for standardization and exchange of energy audit and benchmarking data.
- Experimental work enabled by SER has provided tools and projects that extend beyond the duration of the SER investment.

### Knowledge Transferred

- Knowledge from these projects has been included in at least 45 public presentations over the past 2 years to local, regional, and international audiences.
- Stakeholders have responded positively 5D GIS, which is rolling out publicly (as opposed to an internal tool) in San Francisco in Q2 2016.
- The 5D GIS building energy usage visualization was recognized by the National Institutes of Science and Technology as a US IGNITE Action Cluster, presented at the Global Cities Teams Challenge expo in Washington DC in June 2015.
- Boulder, Colorado is using the energy audit reporting tool.

### Benefit to Local Government

- Energy audits and mini-RCx delivered to local community benefit organizations and small/hard-to-reach businesses aid community energy performance while supporting local government non-energy priorities of inclusion, economic development, and minimizing hardship for these organizations unintentionally created by the ECBO.
- Coordination with other LGs to support regional scaling as applicable.
- The Energy Audit reporting tool is being used by Boulder Colorado, and is being evaluated by other cities.

### Benefit to the State

- SF Environment has shared the experience and lessons learned mapping meters to buildings with PG&E staff and California Energy Commission staff, to aid in the effort to

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comply with statewide provision of energy data for benchmarking in 2017 as required by AB802 (2015).

- The Software Augmented Energy Audit component of this suite of projects was a valuable experiment to reduce the cost of energy project development. Though the method was not as successful as hoped, experience with these tools is informing program design, and information developed from the project continues to yield leads for SF Energy Watch.

### Accomplishments

- Performed remote screening analysis of 220 buildings (and data cleaning on an additional 398 sites). Enrolled 14 non-profit buildings, and completed software energy audits. Enrolled 6 additional buildings.
- Upgraded audit reporting tool and migrated benchmarking database to DOE Standard Energy Efficiency Database (with customizations for ECBO); improved efficiency of these tools has enabled more frequent public reporting.
- Obtained commitment from 25 stakeholders to long term energy reduction. 230 people participated in 5 energy efficiency trainings.
- 5D GIS projects continued without ratepayer investment in 2015. The CityZenith project was recognized by NIST at the 2015 Global City Teams Challenge Expo. 5D GIS project is being adapted for ECBO outreach.
- Provided 5 trainings with 230 participants, launched SF 2030 District. Reformulated project for 2015 to focus on energy audit data analytics.

### Significant Challenges

- Initiating a project dependent upon customer usage data is very challenging. Once data management relationships are established, level of effort to obtain or refresh data decreases.
- Analytics projects require high quality data from the utility, a City, and the community. By the same token, the project enabled the City and PG&E to identify needs and opportunities to improve data and data governance processes, including better assembly and usability of energy-relevant data that the City can and/or should possess in order to better support energy project identification and execution. The data developed and managed by the local government are not restricted by Privacy Rules, so represent a valuable and relatively readily achieved opportunity.

## **2. Strategic Plan Menu # 1.1.2 – Green Building Code**

*Adopt a Green Building policy for municipal development, commercial development and/or residential development.*

### **2.1 Host training on Green Building Code**

**Local Government Partnership:** Madera Energy Watch

**Project Purpose:** Inform local governments and builder community of new energy code

**Project Scope and Components:** Hold one workshop with twenty people attending with a professional expert on the new Title 24 building requirements. If successful, explore the option to conduct more trainings throughout the County

**Deliverables:**

- 1 workshop with at least twenty attendees
- Explore additional trainings

**Date Initiated:** June 2013

**Date Completed:** December 2016

**Original Budget (Cumulative):** \$1,500

**Final Cost (Cumulative):** \$ 0

**Local Match Contribution:** None

**Use of Unspent Funds:** Funds remained unspent, left in the budget at the time the 2015 program ended

**Project Reimbursed for LG Staff Time (Y/N):** Y

#### **Best Practices**

- With little success creating a training program in Madera County, the partnership instead chose to support and promote a similar training (Title 24 building code) to Madera local governments and Madera area builder community that took place in Fresno County.

#### **Lessons Learned**

- Never give up on the intention of bringing quality training to the community. When it was apparent the community could not support the minimum attendance required to sustain



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the training, the program shifted and focused on driving Madera County attendance to a similar training held in Fresno County.

### Knowledge Transferred

- Title 24 builder training.

### Benefit to Local Government

- Recognition that the program would need more paid staff to become successful
- Understanding that a regional approach to training, while not ideal, is better than nothing.

### Benefit to the State

- The experience points out the barriers to builder and local government training in small, hard-to-reach communities so that policy can be directed to help.

### Accomplishments

- City of Madera began engagement with three other local governments (Fresno city, Fresno County, and Clovis) in an air conditioning rebate pilot that PGE created (To Code HVAC Pilot) to build more compliance on pulling permits for AC work.

### Significant Challenges

- Relatively small community
- Fewer contractors
- Government personnel seem to have a fuller plate with little discretionary time for training programs.

## 2.2 Green Building Code Update

**Local Government Partnership:** San Francisco Energy Watch

**Project Purpose:** Cost-effectiveness analysis to support a new construction reach code, and passage of a reach code based upon this analysis.

**Project Scope and Components:** Updated San Francisco Green Building Code to be compatible with Title 24 (2013) CA Energy Standards.

**Deliverables:**

1. Cost-effectiveness analysis
2. Passage of updated code

**Date Initiated:** Sept 2013

**Date Completed:** December 2013

**Original Budget (Cumulative):** \$0

**Final Cost (Cumulative):** Work was included within the scope of “IDSM” code integration project (Menu Item 1.1.4); estimated budget, approximately \$15,000.

**Local Match Contribution:** Not specified

**Use of Unspent Funds:** NA

**Project Reimbursed for LG Staff Time (Y/N):** N

### Best Practices

- Local governments exceed Title 24 by adopting reach codes to improve energy efficiency in residential new construction.

### Lessons Learned

- Ideally, CEC-approved Title 24 compliance software would be available at least 6 months in advance of the effective date for a given code cycle, to afford time to develop

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and adopt reach codes.

- When CEC-approved compliance software is not available, there may be other avenues to perform reach code analysis, including use of Codes and Standards Enhancement (CASE) reports and leveraging other entities investment in prototype/custom software that incorporates updated Title 24 requirements.
- Due to the combination of San Francisco's mild climate, federal preemption of appliance efficiency, difficulty regulating currently un-regulated loads, narrowing opportunity for additionality as Title 24 approaches the ZNE goals, and challenges of enforcing complex prescriptive requirements, future reach codes in San Francisco should be based upon energy performance outcomes (measured operational performance) rather than the current 'percent-beyond-code' model.
- 10% compliance margin was confirmed cost-effective for residential new construction, but could not be established for commercial new construction.

### Knowledge Transferred

- Cost-effectiveness study was shared with both PG&E and BayREN Codes & Standards. BayREN disseminated the study to local governments across the 9-county Bay Area. (Study was specific to Climate Zone 3, so BayREN followed up and expanded the analysis for the other Bay Area climate zones.)
- Staff made approximately 15 presentations to a variety of stakeholders and other jurisdictions.

### Benefit to Local Government

- Provides case study to other LGs working toward adopting/updatings green building codes.
- Informed T24 (2013) reach/green building code updates for San Francisco, Berkeley, and Oakland.

### Benefit to the State

- Demonstrates continued opportunity for cost-effective energy efficiency beyond the T24 baseline.
- Pushes nearly all projects in San Francisco to use the Performance method for T24 compliance.

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### Accomplishments

- Completed cost-effectiveness study of reach code energy requirements.
- Green building code update passed by Board of Supervisors (unanimously), signed by Mayor, and approved by the California Energy Commission.
- SFE staff Barry Hooper was awarded Green Building Leader of the Year by Build It Green for the innovative approach taken to perform the reach code analysis in advance of availability of CEC-approved compliance software.

### Significant Challenges

- Delay in availability of CEC-approved compliance software required major workaround, and in turn influenced the result that we were unable to support the cost-effectiveness of extending the reach code to commercial buildings. Subsequent analysis by TRC for Palo Alto once the software was available enabled Palo Alto to extend their T24 2013 reach code to commercial.) However, delaying this project until compliance software was finalized would delayed this reach code by 18 months, forgoing savings from projects that applied for permit in the interim and increasing permitting complexity.

### **3. Strategic Plan Menu # 1.1.3 – Point of Sale Program**

*Develop/adopt point of sale programs such as a Residential or Commercial Energy Conservation Ordinance. Focus on whole building performance.*

#### **3.1 Residential Energy Conservation Ordinance (RECO)**

**Local Government Partnership:** San Francisco Energy Watch

**Project Purpose:** Passage of RECO update

**Project Scope and Components:** Update Residential Energy Conservation Ordinance (RECO) to include whole-house measures.

**Deliverables:**

1. Passage of new code

**Date Initiated:** Sept 2013

**Date Completed:** 12/31/14

**Original Budget (Cumulative):** \$105,720

**Final Cost (Cumulative):** Not specified

**Local Match Contribution:** Not specified

**Use of Unspent Funds:** Not specified

**Project Reimbursed for LG Staff Time (Y/N):** Y – LGP Implementer staff time.

| <b>Accomplishments</b>   |
|--|
| <ul style="list-style-type: none"><li>• The RECO Taskforce which includes representatives from the real estate, contractor, inspector, and appraisal business sectors, as well as government policy makers and think tanks, developed consensus agreement on all key parameters of updated RECO.</li></ul> |

## **4. Strategic Plan Menu # 1.1.4 – IDSM Code Updates**

*Change local codes to allow and encourage integration of energy efficiency, demand response, and on-site generation.*

### **4.1 Integrated Demand Side Management (IDSM)**

**Local Government Partnership:** San Francisco Energy Watch

**Project Purpose:** 1) Develop 3 energy code update proposals. 2) Passage of 3 code update proposals.

**Project Scope and Components:** Project was initially proposed to develop a package of IDSM measures for incorporation into the San Francisco Green Building Code, supporting the Zero Net Energy goals first articulated in the CA Statewide Energy Efficiency Strategic Plan, which SER funding supports. This package was proposed to include an outcome-based energy efficiency code utilizing the Zero Energy Performance Index (zEPI), renewables via on-site solar PV/thermal requirement, and demand response/transportation electrification via EV infrastructure.

However, the transportation electrification and PV/thermal requirement components were ultimately funded via other sources, and not billed to Strategic Energy Resources. As a result, these efforts are indicated as a match below.

**Deliverables:**

1. Completion of code proposals for EE, RE, and DR/transport.
2. Prepare calculator for setting whole-building energy performance targets using ZEPI

**Date Initiated:** May 2013

**Date Completed:** 12/31/15

**Original Budget (Cumulative):** \$144,260 in 2013-2014

**Final Cost (Cumulative):** \$81,000 (\$40,000 in 2014 and \$50,683.95 2015)

**Local Match Contribution:** \$175,000

**Use of Unspent Funds:** [SF Environment is compensated on a reimbursement basis]

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**Project Reimbursed for LG Staff Time (Y/N):** Y – LGP Implementer staff time.

### Best Practices

- Develop an integrated IDSM approach supporting the CA ZNE goals, local GHG reduction goals, and San Francisco's goal of 100% renewable energy by 2030 & electrification of transport.
- Engage stakeholders in policymaking process.

### Lessons Learned

- Local elected officials determine the order of ordinance adoption; San Francisco Board of Supervisors will address renewable energy, then electric vehicle readiness, and then ZNE/ZEPI as a component of an outcome-based energy code compliance path.
- An Outcome Based complements the T24 Energy Standards; where T24 regulates modeled performance, an outcome based code sets enforceable standards for operational energy consumption.
- An Outcome Based code is technically viable.
- Serial adoption of relative improvements in energy efficiency approaches ZNE asymptotically, but this problem is opaque because comparison between code versions is complex and confusing. A common, simplified index (ZEPI) will put all buildings (new and existing) on common footing, and provide a specific and durable benchmark.

### Knowledge Transferred

- Presented on the case for ZEPI to more than 120 people, including staff of >20 local governments.
- Hosted 5 technical workshops for ZEPI (this project), electric vehicle ready buildings (separately funded), and on-site renewable energy (separately funded from 2015 onward).

### Benefit to Local Government

One ordinance has been passed (renewables), a second is imminent (electric vehicles), and the new approach to efficiency

- Pilot testing ZEPI in 2016, and disseminating results to Bay Area local governments.
- In April 2016, San Francisco Board of Supervisors passed an ordinance requiring new

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buildings of 10 floors or less to incorporate on-site renewable energy systems.

- EV Ready ordinance is near completion, likely to be introduced for consideration in Q2 2016.

### Benefit to the State

- Integrated IDSM local government package supports the CEESP and ZNE goals, and provides an example for consideration in state code development.
- Contributes to local and state GHG reduction mandates.

### Accomplishments

- 1 code update passed; 1 code proposal complete but held for pilot testing (ZEPI), 1 code proposal nearing finalization.
- Hosted 5 technical workshops for ZEPI (this project), electric vehicle ready buildings (separately funded), and on-site renewable energy (separately funded from 2015 onward).
- Convened stakeholder work groups on each of the 3 topics: Solar Ordinance Technical Working Group, ZEPI/Outcome Technical Advisory Workshop, and EV Ready Task Force.
- Completed draft Outcome Based Code/ZEPI ordinance, compliance checklist, and online target-setting & enforcement calculator.
- Researched policy models in other locales; obtaining input from Seattle (outcome-based code adopted) and Washington DC (enforcing outcome-based element of International Green Construction Code). Obtaining technical input from New Buildings Institute, 2030 Challenge, and City of Palo Alto.
- Completed two studies:
  - 1) On-site generation in new construction via photovoltaics (SER 2014). Though the solar-only ordinance was passed in April 2016, trailing legislation is anticipated to yield a 'Better Roofs' policy, which will require all new construction to include any combination of on-site PV, solar hot water, and/or green roof. SF Planning Department is sponsoring a separate cost/benefit study on green roofs, including energy impacts.
  - 2) Technical framework for an Outcome Based Energy reach code and Zero Energy Performance Index rating (ZEPI).
- Better Roofs ordinance development continued with in kind funding and was introduced as solar only in Q1 2016.
- Electric Vehicle Readiness ordinance in development (with in kind funding.) To be



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introduced Q2 2016.

### Significant Challenges

- SER funding rules are currently not well configured to support the ZNE goals or the breadth of the CEESP, for two reasons:
  - SER “Strategic Plan Menu” guidance pushes local governments to narrow focus to the “Local Government” chapter of the CEESP, yet Local Governments powers, responsibilities, and networks interact with the entire CEESP.
  - Energy efficiency is a critical element of the ZNE goals, but onsite generation as well as planning for electrification of transport are essential to realizing ZNE.

## 5. Strategic Plan Menu # 1.1.5 – Energy Efficiency Codes and Programs

*Develop and adopt programs to encourage energy efficiency such as one-stop permitting, on-line permitting, separate Zero Net Energy permit processes, density bonuses, or a recognition program.*

### 5.1 Mini RCx Market Analysis

**Local Government Partnership:** East Bay Energy Watch

**Implementer:** QuEST

**Project Purpose:** Determine if direct install customers represent significant opportunities for RCx-type measures and deeper energy savings.

**Project Scope and Components:** Conduct a feasibility assessment of delivering RCx ECMs and strategies to the SMB market.

**Deliverables:** End-of-year report with findings

**Date Initiated:** 10/1/2014

**Date Completed:** 12/31/2014

**Original Budget (Cumulative):** \$5,178.00

**Final Cost (Cumulative):** \$5,170.00

**Local Match Contribution:** \$0

**Use of Unspent Funds:** Unspent

**Project Reimbursed for LG Staff Time (Y/N):** N – Implementer is not LG

#### Best Practices

- The cycle of direct install customer engagement should not end with an installed project affecting one building system. Those same customers should be screened for additional energy efficiency opportunities across other building systems and equipment.

#### Lessons Learned

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- Direct install (e.g. lighting) programs serve a diverse customer class. Larger energy users within that class present significant opportunities for deeper energy savings.

### Knowledge Transferred

- This effort was undertaken in collaboration with direct install program implementers, who would be the delivery channels for identified measures. Findings of the analysis were presented to the East Bay Energy Watch Strategic Advisory Committee.

### Benefit to Local Government

- RCx in small buildings achieves energy savings that translate to emissions reductions toward each local government's Climate Action Plan goals, where applicable.

### Benefit to the State

- Deeper energy savings achieved in hard-to-reach customer classes like small commercial buildings bring the building stock closer to zero net energy.

### Accomplishments

- Staff identified 40 customers who could benefit from mini-RCx measures and conducted GoogleEarth audits to survey rooftop HVAC equipment as a step in the screening process. Screened customers could participate in a mini-RCx pilot administered by Community Energy Services Corporation and DNVGL via the SmartLights and BEST Programs, respectively. Staff presented overview of proposed pilot to EBEW SAC that included a scope of work for pilot partners, potential savings to be achieved, and costs to participants.
- A pilot proposal was submitted to PG&E as part of the AB 802 High Opportunity Projects and Programs (HOPPs) in 2016 as an effort to scale this activity.

### Significant Challenges

- None to report

## **5.2 Pass-through Measures**

**Local Government Partnership:** San Francisco Energy Watch

**Project Purpose:** Passage of update to the SF rent ordinance

**Project Scope and Components:** Include energy improvement measures in Rent Ordinance Pass-through costs.

**Deliverables:**

1. Online calculator to apportion tenant and owner share of energy efficiency capital costs
2. Passage of updated code

**Date Initiated:** Sept 2013

**Date Completed:** 12/31/14

**Original Budget (Cumulative):** \$64,210

**Final Cost (Cumulative):** Not specified

**Local Match Contribution:** Not specified

**Use of Unspent Funds:** Not specified

**Project Reimbursed for LG Staff Time (Y/N):** Y – LGP Implementer staff time.

| <b>Accomplishments</b>  |
|---|
| <ul style="list-style-type: none"><li>• Work paused pending replacement of staff. Re-initiated in September 2015. Requested meeting with Rent Board to review the existing policy for cost-sharing between landlord and tenant of capital cost of efficiency upgrades that benefit tenants.</li></ul> |

### 5.3 Coordinate Zero Net Energy Project

**Local Government Partnership:** San Mateo County Energy Watch

**Project Purpose:** Initially reach 200 participants at local governments meetings or events, engaged in discussion on reach code to zero energy action. Goal was expanded to 400 in March of 2015.

**Project Scope and Components:** Engage with community partners, subject matter experts and stakeholders to identify barriers, perceptions and technologies for moving existing residential code to zero energy.

**Deliverables:**

- Number of participant - meetings, engaged in discussion at meeting and/or events.

**Date Initiated:** January 2013

**Date Completed:** December 2015

**Original Budget (Cumulative):** \$42,814

**Final Cost (Cumulative):** \$20,281

**Local Match Contribution:** \$0

**Use of Unspent Funds:** \$32,533 remaining funds were rededicated to other SER efforts.

**Project Reimbursed for LG Staff Time (Y/N):** Y – LGP Implementer staff time.

#### Best Practices

- Engage stakeholders and public officials in policymaking process.
- Establish strategic partnerships to leverage resources, expertise and communication networks.
- Consider state policy, such as the CEESP, when adopting local policy..

#### Lessons Learned

- Local governments are interested in ZNE, but there are challenges in the definition of ZNE and its implementation that make it difficult for local governments set policy.
- Local governments are more likely to build their own facilities to ZNE if given the tools, support and knowledge, and resources to plan for ZNE at the outset.
- A ZNE action plan for local governments and policy language were identified as the most

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useful approaches to supporting a transition to ZNE.

- Staff attended discussions with CPUC staff on the long term strategic energy action plan. Zero net energy was among the strategies for residential by 2020. Staff considered that, depending on how ZNE was eventually defined, the discussion and awareness of ZNE should start now to support cities and early adoption.
- Local government building and planning departments go through a stressful learning process every time the building code is updated. In a previous year, a cost-effectiveness study was completed, which helped local governments develop reach codes, but the next code change was expected to surpass the reach code approximately half the local governments in San Mateo County had just adopted.

### Knowledge Transferred

- Presentations were made at a number of local government board and committee meetings.
- Two workshops (best attendance for a workshop of this kind in the US, based on feedback from NBI) were held in San Mateo County with 130 participants across the two days.
- New partnerships were formed with NBI, DOE, BayREN, PG&E, and others.
- Three videos were completed at the end of 2015, to be used by local governments to educate stakeholders, such as architects, builders, building departments, property owners, etc. These videos are posted on the San Mateo County Energy Watch website and were developed in collaboration with a PG&E contractor.

### Benefit to Local Government

- The effort provided education and awareness to both elected officials and city staff on ZNE as a direction to reduce GHG emissions and voluntarily go beyond code.
- It furthered an understanding of the importance of a building project team prior to design and construction, and inspired local government to consider ZNE municipal buildings as a way to reduce their local government GHG emissions.
- It provided a venue for discussion on related issues.
- It introduced consideration of the life cycle cost savings for the building.

### Benefit to the State

- The goal has been for SMC to stand as an example for initiatives the State is promoting.
- Input has been provided to the CPUC on the LGP's efforts.
- The SMCEW stands as an example of regional collaboration.

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### Accomplishments

- 297 attendees, from elected officials to city staff to contractors were reached through this effort.
- Three videos were produced to educate contractors, homeowners, architect and the general public on high performance buildings and ZNE.
- According to NBI, the most successful workshop on ZNE and high performance building, in terms of attendees over two days, was held here in San Mateo County.
- Draft Zero Energy Action plan was completed and vetted with the cities in San Mateo County, with a survey for most important elements and next steps towards countywide policy and tools.

### Significant Challenges

- Cities need a great amount of support every time a Title 24 update has to be implemented. Some would rather go directly to a ZNE policy if there was a pathway.
- There seems to be no practical way to perform a cost-effectiveness study to ZNE because of the Time Dependent model. The LGP desires a pathway to ZNE that fits the state's needs.
- The LGP is now conducting interventions, for new construction projects undertaken by cities to encourage a project team approach to ZNE.
- For new residential and commercial construction: by the time a project reaches a planning department, it's too late to influence the design team approach. The LGP desires to make architects and builders aware of the opportunity in advance of design work.

### 5.4 Promote residential energy efficiency and zero net energy for large homes

**Local Government Partnership:** San Mateo County Energy Watch

**Project Purpose:** Hold a total of 7 engagement events for Large Residential Resource Conservation Collaborative (LR2C2) in 2013. Attendance of 100 people attending public events related to large home energy efficiency transition in 2014 to 2015. Engage realtors, cities with large homes and the public in discussion.

**Project Scope and Components:** Host and provide guidance to Large Residential Resource Conservation Collaborative (LR2C2).

**Deliverables:**

- Number of engagement events for the public.
- Number of public/realtors engaged

**Date Initiated:** January 2013

**Date Completed:** September 2015

**Original Budget (Cumulative):** \$15,000

**Final Cost (Cumulative):** \$2,012

**Local Match Contribution:** \$0

**Use of Unspent Funds:** \$12,988 remaining funds were rededicated to other SER efforts

**Project Reimbursed for LG Staff Time (Y/N):** Y – LGP Implementer staff time.

#### Best Practices

- In the process of developing GHG inventories and in meetings with participating cities, staff realized that San Mateo County had a number of cities with little to no commercial base. The effort was launched for those cities, which also had mostly large and more rural homes.
- Working collaboratively with cities that have the same challenges is a more cost-effective approach.
- Webinars were held in the late afternoon into evening to make accessible to homeowners.
- The webinar was recorded and made accessible to future viewers.



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### Lessons Learned

- Though home owners of large homes are interested, there are few programs designed to serve large homes. For that reason, staff, in collaboration with city staff, decided to find subject matter experts to present and record a 90-minute webinar in collaboration with PG&E, “Secrets to Controlling Energy Use in Larger Homes”, which is posted on the SMCEW website.
- Partnered with San Mateo County Association of Realtors (SAMCAR) to host a webinar for real estate professionals.
- Used above webinar as a preview to a full-day class, “Green Home Expertise for Real Estate Professionals”.
- Best practices for large homes is detailed energy audits by circuit in the home, to reveal unexpected large energy draws, which contribute to high baseline usage.

### Knowledge Transferred

- Webinars were held in the late afternoon into evening to make accessible to homeowners. 84 attendees were reached out of the goal of 100, but the webinar was recorded and made accessible to future viewers.
- Meetings with the LR2C2 working group as well as real estate professionals. Six out of the seven events goal was reached.
- New partnerships were formed with realtors and SAMCAR.
- The webinar was posted on the San Mateo County Energy Watch website: [www.smcenergywatch.com/events\\_training/past-events](http://www.smcenergywatch.com/events_training/past-events)
- Staff presented energy education to the County’s volunteer academy training program.

### Benefit to Local Government

- Local governments with little to no commercial but just large homes received a solution and resources to provide to their residents.
- The effort provided a first step in terms of a pathway to reduce GHG emissions.
- It provided a venue for discussion on related issues.

### Benefit to the State

- Since these materials are posted on the SMCEW website, other cities and the State can leverage the resources.
- Any reductions in GHG emissions locally, provide the same for the State.

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### Accomplishments

- Approximately 120 attendees, from elected officials to city staff to contractors were reached through this effort.
- Webinars were produced for posting.
- Relationships were formed with stakeholders, such as real estate professionals.

### Significant Challenges

- No turn-key program exists for larger homes.
- Large homes vary widely in terms of their energy density, kWh, no matter the age or size. This was realized from a presentation provided by Home Energy Analytics.
- Reaching homeowners is generally not during normal work hours.

## **6. Strategic Plan Menu # 1.1.6 – Educational Programs**

*Develop educational programs for local elected officials, building officials, commissioners, and stakeholders to improve adoption of energy efficiency codes, ordinances, standards, guidelines and programs.*

### **6.1 Take 5! For Energy Efficiency Outreach Campaign**

**Local Government Partnership:** Kern Energy Watch Partnership

**Project Purpose:** To develop community wide campaigns aimed at increasing residential awareness of energy efficiency and resources available to them and to utilize elected officials to assist in getting the word out to residents.

**Project Scope and Components:** Work with 12 local government partners (Arvin, Bakersfield, California City, County of Kern, Delano, Maricopa, McFarland, Ridgecrest, Shafter, Taft, Tehachapi, Wasco) to carry out an energy awareness public outreach campaign which included; municipalities publicly proclaiming October as Energy Awareness month at their Board or City Council meetings, development of a community workshop, placing coupon inserts, and promoting an Ugly Sweater contest.

**Deliverables:**

- Proclamations of Energy Awareness Month
- Outreach Community Meeting
- Door-to-Door campaign
- Coupons inserted into newspapers
- Ugly Sweater Challenge

**Date Initiated:** November 2013 & November 2014

**Date Completed:** January 2015

**Original Budget (Cumulative):** \$3,500

**Final Cost (Cumulative):** \$

**Local Match Contribution:** \$

**Use of Unspent Funds:**

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**Project Reimbursed for LG Staff Time (Y/N):** Y – LGP Implementer staff time.

### Best Practices

- Encourage local governments to lead by example with energy efficiency by proclaiming October Energy Awareness Month, and educating their residents on the importance of energy efficiency.

### Lessons Learned

- None Reported

### Knowledge Transferred

- None Reported

### Benefit to Local Government

The benefit to the local government partners that participated in this campaign is that it allowed them an opportunity to speak directly with their constituents about the importance of energy efficiency. It allowed them an opportunity to meet and greet and to hear feedback from their constituents about why energy efficiency may or may not be a high priority for them. It also allowed the elected officials to speak to residents about examples of how their municipalities have taken steps to increase energy efficiency in their facilities, thus demonstrating that they are being good stewards of taxpayer dollars.

### Benefit to the State

The activity benefits that State in that it gets elected officials and high ranking representatives on track for meeting the State's energy efficiency goals. In order to speak about the importance of energy efficiency in the local areas they must also speak of the statewide impact their local efforts will have. It also gets them to thinking about policies and processes that they can begin to implement in their municipalities. The elected officials and representatives are the local face for the State's efforts and are often times a trusted source of information for their local residents.

### Accomplishments

- Seven proclamations were signed
- One community workshop was held
- Reached 3,000 homes

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- Ten elected officials participated
- Twenty – Two Thousand coupon inserts were printed and distributed
- Four city council members or mayors participated in the Ugly Sweater Contest

### Significant Challenges

- None reported.

### 6.2 Promote Public Awareness of EE Programs

**Local Government Partnership:** Madera Energy Watch

**Project Purpose:** Inform local governments and builder community of new energy code

**Project Scope and Components:** Work with local agencies to promote public awareness of MEW Energy Efficiency programs.

**Deliverables:**

- Community event
- Community EE and safety presentation.

**Date Initiated:** June 2013

**Date Completed:** October 2015

**Original Budget (Cumulative):** \$3,500

**Final Cost (Cumulative):** \$ 500

**Local Match Contribution:** None

**Use of Unspent Funds:** Unspent funds were left in the budget at the time the 2015 program ended

**Project Reimbursed for LG Staff Time (Y/N):** Y

| Best Practices  |
|---|
| <ul style="list-style-type: none"><li>• Put on a community event in a hard to reach community that brings many utility and community services to that area.</li></ul> |



| Lessons Learned   |
|---|
| <ul style="list-style-type: none"><li>• Leveraging resources can make a big difference. What worked particularly well here was the close relationship a local PG&amp;E Account Manager had with the PG&amp;E safety outreach team as well as her excellent rapport with the County of Madera. PG&amp;E was able to bring the safety demonstration to an official meeting of the Madera County Board of Supervisors. This helped achieve the greatest exposure to the safety message at a fraction of what was budgeted.</li></ul> |

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### Knowledge Transferred

- One elected official from the Madera County Board of Supervisors, three local government staff members, and community members in the town of Fairmead were provided general energy efficiency information and presentations by energy efficiency program representatives on available resources.

### Benefit to Local Government

- Unincorporated area of Fairmead got unusually high media attention from hosting the small community event

### Benefit to the State

- Public awareness of energy efficiency.
- Public officials and citizens awareness of utility line safety.

### Accomplishments

- Community event in Fairmead was featured on the community's Facebook page
- Turnout:
  - Elected Officials: 1
  - Local Government Staff: 3
  - Community Members: 50

### Significant Challenges

- Little or no budget
- Revolving door of local government implementer (challenged has been addressed with a new implementer: Madera County Economic Development Commission)

### 6.3 Public Service Announcement: Promote EE and Safety

**Local Government Partnership:** Madera Energy Watch

**Project Purpose:** Inform local governments of energy efficiency resources and promote safety.

**Project Scope and Components:** Work with local agencies to promote public awareness of MEW Energy Efficiency programs and safety through a public service announcement (PSA) in the form of a presentation to the Madera County Board of Supervisors public meeting. The presentation included instruction and in-person demonstrations to local elected officials and members of the public.

**Deliverables:**

- Community event
- Community EE and safety presentation.

**Date Initiated:** June 2013

**Date Completed:** August 2013

**Original Budget (Cumulative):** \$1,000

**Final Cost (Cumulative):**

**Local Match Contribution:** None

**Use of Unspent Funds:** Unspent funds were left in the budget at the time the 2015 program ended

**Project Reimbursed for LG Staff Time (Y/N):** Y

#### Best Practices

- Utilize resources available through PG&E, and bring their safety demonstration to the community with a demonstration at the Madera County Board of Supervisors.
- Put on a community event in a hard to reach community that brings many utility and community services to that area.

#### Lessons Learned

- Leveraging resources can make a big difference. What worked particularly well here was the strong connection the new lead local partner, Madera County Economic Development Corporation, has with community leaders and the church community in



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Fairmead, Madera County. The community of Fairmead has a high concentration of low income residents. The community trusted the Madera EDC and therefore trusted that this would be an event worth the time and effort for community members to attend.

### Knowledge Transferred

- Safety precautions, especially around trees near electrical lines (safety demonstration)
- Each elected official on the Board of Supervisors were informed and engaged in the demonstration.

### Benefit to Local Government

- Safety demonstration brought out a larger than usual attendance to the Board of Supervisors meeting, including elected officials, staff and community members.

### Benefit to the State

- Public awareness of energy efficiency.
- Public officials and citizens awareness of utility line safety.

### Accomplishments

- PGE safety demonstration was well received by Board of Supervisors, and invited to come back in a few years.

### Significant Challenges

- Little or no budget
- Revolving door of local government implementer (challenged has been addressed with a new implementer: Madera County Economic Development Commission)

### 6.4 Host Energy Efficiency trainings locally for students, professionals, and local government staff

**Local Government Partnership:** Mendo-Lake Energy Watch

**Project Purpose:** Provide trainings to local government professionals and the general community so energy efficiency expertise becomes widespread and typical.

**Project Scope and Components:** Host classes for local government staff and other relevant parties on energy efficiency topics. Major class topics to include Title 24 updates, adoption of reach codes, benchmarking, and agricultural energy efficiency measures.

**Deliverables:**

- Host at least 3-4 trainings annually.
- Document attendance at trainings.
- Use trainings as vehicle to build Energy Watch brand recognition to inform future class selection and program offerings.

**Date Initiated:** January 2013

**Date Completed:** Not yet completed (ongoing)

**Original Budget (Cumulative):** Approximately \$15,000

**Final Cost (Cumulative):** N/A (still ongoing)

**Local Match Contribution:** N/A

**Use of Unspent Funds:** Unspent funds were re-spent on schools support efforts.

**Project Reimbursed for LG Staff Time (Y/N):** Y – for LG staff at Mendo-Lake Energy Watch.  
N – for LG staff at stakeholder jurisdictions.

#### Best Practices

- Classes should be well-planned in the energy watch's implementation timeline. Surveys should be used to ensure demand is adequate for planned classes.

#### Lessons Learned

- Surveying the audience for classes (LG staff, business owners, and general population) should be done as a planning tool. This will ensure demand is adequate.

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### Knowledge Transferred

- The LGP has been sharing lessons learned with PG&E staff and other energy watch partners.

### Benefit to Local Government

- These educational programs assist Local Government by providing valuable educational resources to the members of their communities.

### Benefit to the State

- Classes and other educational offerings are key to informing local government representatives and the general population about strategic plan menu items. This is especially the case in rural areas, where there is still little educational workshops available to local government staff.

### Accomplishments

- Held four classes from 2013-2015.

### Significant Challenges

- Starting in 2014, PG&E's Energy Training Center staff stated trainings would only be held if the minimum number of in-person attendees was 30.

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### 6.5 PG&E Codes and Standards Classes

**Local Government Partnership:** San Mateo County Energy Watch

**Project Purpose:** Make PG&E Pacific Energy Center classes more accessible to local building officials. Work with cities to increase community code compliance.

**Project Scope and Components:** Host five (5) PG&E Codes and Standards classes locally with PG&E, or PG&E contracted presenters.

**Deliverables:**

- Number of engagement events for local building officials or other stakeholders.

**Date Initiated:** January 2013

**Date Completed: ended:** June 2015

**Original Budget (Cumulative):** \$0 (included in baseline services)

**Final Cost (Cumulative):** \$0

**Local Match Contribution:** \$0

**Use of Unspent Funds:** n/a

**Project Reimbursed for LG Staff Time (Y/N):** Y – LGP Implementer staff time.

#### Best Practices

- PG&E offers many classes which can be targeted as a resource and made accessible locally to local governments in San Mateo County.
- Working collaboratively with PG&E is a more cost-effective approach to educating stakeholders on specific topics that developing them as a separate endeavor.

#### Lessons Learned

- Considerable outreach, including through PG&E is needed to get classes filled.
- Class offerings from PG&E are well-presented and a valuable resource.
- This effort ended when BayREN launched its codes and standards program. No need for duplicate efforts, when BayREN is working directly with building departments.

#### Knowledge Transferred

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- Three (3) classes were completed before the effort ended.
- Outreach for the classes reached many more potential attendees.

### **Benefit to Local Government**

- Provided local access to PG&E resources.
- Improved knowledge of codes for local building officials.
- It provided a venue for discussion on related issues.

### **Benefit to the State**

- Any reductions in GHG emissions locally, provide the same for the State.

### **Accomplishments**

- Three (3) classes were completed before the effort ended.

### **Significant Challenges**

- Getting attendees to sign up for the classes.

### 6.6 CALGreen, Title 24, Green Building Codes education

**Local Government Partnership:** Valley Innovative Energy Watch (VIEW)

**Project Purpose:** Increase the design and building community's support and awareness of CALGreen, Title 24, and other green building codes and standards.

**Project Scope and Components:** Create multi-county educational workshops for and conduct outreach to the design and building community to build support for and understanding of CALGreen, Title 24, other green building codes and standards, and code compliance.

**Deliverables:**

- Cancelled

**Date Initiated:** 03/2013

**Date Completed:** N/A; cancelled (effective March 2014)

**Original Budget (Cumulative):** \$21,600

**Final Cost (Cumulative):** N/A; project cancelled

**Local Match Contribution:** Undetermined. To date match has been in uncategorized local government staff time and staff time of local Architect on steering committee.

**Use of Unspent Funds:** Reallocated unspent funds to Energy Benchmarking and Energy Action Plans.

**Project Reimbursed for LG Staff Time (Y/N):** N – Implementer is not LG

#### Best Practices

- Gathering a small steering committee with one municipal representative, one design-build representative and one LGP representative allowed for nimble responses as well as effective delegation of efforts. The singular representatives from each area also made it easier for stakeholders to know who to go to as a representative of their specific field and prevented regional market confusion. The small steering committee also made it easier when time came to cancel the project as no “personal” interests were at stake.

#### Lessons Learned

- Sometime, good ideas are not unique. It was pure coincidence that the steering committee and VIEW Partnership envisioned a training program so similar in scope to

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the Energy Code ACE program. The partnership learned that working closely with the IOU partners is an integral part of success; it was because of the LGP's clear paths of communication and internal briefings that as soon as the Energy Code ACE program was made aware to the partnership IOU program managers they were able to inform the partnership implementer and the implementer and the small steering committee were able to make the quick decision to put the program on hold (and ultimately cancel the program). Without strong communication between the implementer and the IOUs the risk of unnecessarily expending rate payer funds could have occurred. Thankfully, strong management, open communication and a nimble leadership group kept that from happening.

- The design build community in Tulare and Kings Counties are subsets of either Bakersfield or Fresno. Any membership associations (i.e. USBGC, American Institute of Architects, Construction Specifications Institute, etc.) are based in the larger metropolises. Connecting with local design-build community requires a trusted "local" voice as well as the support of the Association. The local trade associations are willing to hold events in the two counties, but the cost of the event is the responsibility of the requester as the Chapters seem not to have the resources to expend on the ground outside of the major population centers.
- There are roughly 20 building officials/staff in the two counties and eleven incorporated cities in the Partnership. That small number of municipal staff changed the ideas behind information delivery from being in person based to web based given travel by staff to information session was very difficult. The steering committee quickly realized that any in person training would have to happen as a combined effort of municipal staff and the design build community in each city/county or by web.

### Knowledge Transferred

- Steering committee shared their lessons learned (by way of the partnership implementer) with the IOUs and Partnership municipalities.
- Approach to program delivery was utilized in post-cancellation efforts to promote Energy Code ACE in the VIEW Partnership.

### Benefit to Local Government

- Local governments would have a better understanding of green building codes, which would be necessary when retrofits, new development, etc. are needed or funding becomes available.
- Despite cancellation, this information is being provided through the Energy Code ACE program.

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### Benefit to the State

- The design and building community and local government's support of code compliance will increase energy savings across new development, cutting emissions to meet the State's efficiency and emissions reductions goals.
- Despite cancellation, this information is being provided through the Energy Code ACE program.

### Accomplishments

- Relationships established with local design build community, trade member associations and local building departments.
- Successful steering committee model identified for future partnership efforts.

### Significant Challenges

- Energy Code ACE was designed (albeit on a much larger and more sophisticated scale) to accomplish the same objectives as the Partnership program.
- Small number of local building staff meant bringing the region together in one location would be impossible (since the singular building inspector for a city could not leave for a full day of training).
- Inability to leverage local chapters of trade member associations (any Tulare/Kings events would have to be paid for by the Partnership as no cost-share options existed).



## **7. Strategic Plan Menu # 1.2.1 – Stakeholder Engagement**

*Implement any of the strategies in section 1.1 through a process involving internal and external stakeholders, etc.*

### **7.1 Energy Council: Multifamily Services**

**Local Government Partnership:** East Bay Energy Watch

**Implementer:** StopWaste

**Project Purpose:** Support local government engagement of multifamily property owners to improve energy efficiency in multifamily housing stock.

**Project Scope and Components:** In 2013-2014, StopWaste was contracted by PG&E through the East Bay Energy Watch Local Government Partnership's Strategic Energy Resources program to enhance outreach and technical support for multifamily energy efficiency retrofits. Stipends ranging from \$9,375 to \$12,875 (depending on the breadth and depth of the scope proposed) were offered to EBEW jurisdictions (the Cities and Counties in Alameda and Contra Costa counties) to provide outreach to multifamily property owners or recommendations on a technical topic related to energy efficiency retrofits in the existing multifamily housing stock. Thirteen jurisdictions requested and received stipends. They collectively delivered and promoted four multifamily property owner workshops and contributed content to a technical recommendations report. StopWaste oversaw the jurisdictions' activities and managed the stipend assignment and payment processes. The scope under this contract also included delivery of one 4-day training on green multifamily property management practices.

**Deliverables:**

- Local government staff introduced to multifamily energy retrofits and programs
- Stipends delivered to local governments for technical assistance
- Multifamily property owners engaged in multifamily property owner workshops
- Multifamily property managers trained in green management practices
- Interest forms submitted to BAMBE
- Technical recommendations report

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**Date Initiated:** January, 2013

**Date Completed:** October , 2014

**Original Budget (Cumulative):** \$ 175,000

**Final Cost (Cumulative):** \$175,000

**Local Match Contribution:** \$50,000

**Use of Unspent Funds:** N/A

**Project Reimbursed for LG Staff Time (Y/N):** Y – LGs were awarded stipends

### Best Practices

***Make it affordable:*** Effective multifamily energy efficiency programs make energy upgrades more affordable by offering a suite of financial incentives that lower the upfront cost of energy audits and upgrades, and financing options that help property owners amortize costs over time.

***Make it easy:*** Effective programs make it easy for property owners to invest in energy upgrades by providing one-stop-shop technical assistance that lowers the transaction costs property owners and managers face when seeking information and incentives.

***Make it valuable:*** Effective programs help property owners leverage their investments in energy upgrades to create additional value in the form of increased demand for their rental units, less tenant turnover, and other benefits.

### Lessons Learned

#### Market Higher Incentives (for Deeper Savings) Effectively

- If the ultimate goal is to motivate property owners to invest in multi-measure energy upgrades whenever possible, then rebates designed to incentivize these upgrades must be marketed effectively. Any materials promoting single measure rebates should also inform property owners that higher incentive levels exist for the same measures if they are willing to install those measures in combination with additional upgrades. According to focus groups of multifamily property owners in Berkeley, Emeryville, and Oakland, the most effective ways to market energy upgrade incentives are through property owner association newsletters and strategic placement on the internet.

#### Provide Higher Incentives for Deeper Savings

- Whether operating reactively or proactively, owners of multifamily properties often

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undertake building improvements on a single measure, rather than a more comprehensive, multi-measure basis. Incentives such as PG&E's existing single measure rebates should be offered to motivate energy efficient choices when a property owner is only willing to perform a stand-alone building improvement (e.g., a furnace or window replacement).

### **Scale Resources to Match Goals**

- The California Public Utilities Commission's (CPUC) Long Term Energy Efficiency Strategic Plan sets a goal of achieving a 40% decrease in purchased energy in 100% of existing multifamily homes by 2020. Likewise, local governments throughout the state are setting ambitious energy-reduction targets designed to help achieve local climate action goals. The scale of resources required to achieve these goals is immense, and is vastly larger than the current level of resources dedicated to increasing energy efficiency in multifamily buildings.

### **Enable Owners and Tenants to Share Costs/Benefits**

- Split financial incentives between multifamily building owners and tenants are commonly cited as a barrier to making energy upgrades, especially where units are individually metered for energy use as is commonly the case in many cities. Building owners are often reluctant to invest in energy improvements that reduce energy costs for tenants but offer no direct financial return for the owner. In buildings without individual meters where owners pay utility costs, tenants likewise receive no direct financial incentive to conserve energy. It may be possible to accelerate the implementation of energy efficiency upgrades if tools can be developed to directly remove the split incentive barrier.

**\*\***Tools to remove the split incentive barrier could include a combination of the following:

- development of legally vetted model lease language that property owners would be encouraged to incorporate into their lease agreements designed to enable energy improvements to be made under specified conditions with a clear process for identifying costs and benefits to both parties and a structure for enabling costs to be recouped in an appropriate manner;
- adoption of policy changes if needed to enable such lease language to be incorporated; and,
- development of technical tools for projecting cost savings associated with certain energy improvements to existing multifamily buildings to help all parties establish a ceiling on potential repayment obligations passed on to tenants.

### **Provide a Single, Knowledgeable Point of Contact Offering On-Demand, Seamless Support**

Perhaps the single most valuable way to make it easy for property owners to undertake energy upgrades is to offer and market a hotline and website that property owners can contact for on-demand comprehensive technical assistance. This assistance should include the capacity to advise property owners on:

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- Available program offerings
- Accessing available incentives and financing
- Finding a qualified contractor and comparing bids
- Benchmarking energy use
- Selecting energy upgrade measures
- Estimating costs, savings and return on investment
- Conducting an energy audit
- Monitoring utility bills to verify savings
- Referrals to other programs and opportunities

### **Invest in Training for Building Operators and Contractors**

Existing multifamily buildings are diverse in several ways and include complexities and barriers that do not exist in single-family homes. The vintage and physical configuration of a multifamily building affects the types of building systems present as well as the technical protocols and applicable codes and standards. As such, the multifamily sector requires programs and services designed specifically for multifamily buildings. It follows that the energy professionals doing the work and the individuals operating the building must also participate in specialized training geared toward the multifamily context.

### **Help Owners to Communicate the Story of Their Energy Upgrades**

Once it is possible for property owners to access whole building energy use data, a range of services can be provided to help owners communicate the story of the energy-related benefits they have created. For example, programs can provide templates and assistance to help property owners communicate typical energy cost savings and associated comfort benefits in online and print materials. Local programs can also recognize highly energy efficient buildings in a manner that owners can leverage, such as by providing a special recognition logo for use in marketing, inclusion on a website featuring select properties, or a label affixed to the building.

Programs can also engage local rental (or sale, in the case of condos) listing services to encourage them to include fields stating typical utility costs to enable tenants and buyers to factor this information into their decisions. Certain niches in the prospective tenant market may value this information in making decisions on where to live, which can further motivate property owners to invest in improvements.

Local governments should consider whether property owners should be required to provide information on typical energy costs (derived from whole building energy use data or energy audits) to prospective tenants, as is now required in select U.S. cities.

### **Knowledge Transferred**

- Approximately 30 participants joined a recruitment webinar on July 15, 2013. The content of the workshops included an overview of the benefits and types of energy upgrades

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possible in existing multifamily buildings, and a description of ratepayer funded rebate programs available. The programs described included the EUC-MF Whole Building Pilot from PG&E and the EUC-MF Bay Area Multifamily Building Enhancements program from BayREN, the MFEER single-measure rebate program, and the Energy Savings Assistance Program for low-income households. Additional programs were introduced by the local hosting jurisdiction as applicable.

- Local jurisdictions with existing MF Energy expertise were offered stipends to provide input on technical issues based upon their area of experience and focus.
  - **Berkeley** – Integrating mandatory existing building ordinances with whole building incentives
  - **Hayward** – Multifamily Pay As You Save® financing
  - **Oakland** – Electric Vehicle Infrastructure in Multifamily Housing
  - **Alameda County** – Weatherization Assistance Programs for multifamily
- The four-day Multifamily Green Property Management Training was held in February, 2014. The property management training targeted asset, property and energy managers who influence existing multifamily building energy usage in several ways:
  - Purchasing decisions for energy upgrades at times of maintenance, repair and unit turn-over
  - Operational decisions about energy management strategies such as benchmarking, commissioning, and adding system controls and monitoring
  - As a channel for outreach to property owners for participation in energy upgrade incentive programs at times of larger capital improvements

The curriculum covered the entire Building Performance Institute's Multifamily Energy Efficient Building Operator certification training and eight additional hours on green operations and maintenance. The training is also coordinated with the Bay Area Green Business program's and informs participants about the Property Management checklist for Green Business certification. The training was attended by 25 participants.

### Benefit to Local Government

- Participating Local Governments received (funded) training and capacity building on Multi-Family energy efficiency program outreach and technical services.

### Benefit to the State

- Support Local Government's ability to serve diverse customer sectors which supports AB 32 Goals

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### Accomplishments

- 30 local government staff joined an introductory webinar on July 15, 2013
- Each participating municipality used knowledge to support ongoing policy and program development work
  - **Berkeley** – Integrating mandatory existing building ordinances with whole building incentives
  - **Hayward** – Multifamily Pay As You Save® financing
  - **Oakland** – Electric Vehicle Infrastructure in Multifamily Housing
  - **Alameda County** – Weatherization Assistance Programs for multifamily
- 25 Property Managers received Building Performance Institute's Multifamily Energy Efficient Building Operator certification training 135 property owners attended 5 multifamily property owner workshops
- 190 interest forms submitted to BAMBE, representing 8,000 units
- Outreach to property owners conducted in 13 EBEW jurisdictions
- Technical recommendations report

### Significant Challenges

- Coordinating multiple parties and finding a time and place that would serve the highest number of people.

### 7.2 Stakeholder process

**Local Government Partnership:** San Francisco Energy Watch

**Project Purpose:** See Scope and Components

**Project Scope and Components:** Organize stakeholder Task Force and community outreach for each new code/code update.

**Deliverables:**

1. Number of meetings, participants

**Date Initiated:** Sept 2013

**Date Completed:** 12/31/14

**Original Budget (Cumulative):** Included in Codes listed above

**Final Cost (Cumulative):** Included in Codes listed above

**Local Match Contribution:** Not specified

**Use of Unspent Funds:** Not specified

**Project Reimbursed for LG Staff Time (Y/N):** Y – LGP Implementer staff time.

| Accomplishments   |
|---|
| <ul style="list-style-type: none"><li>• Cost effectiveness studies, stakeholder processes, and code update language developed for code updates.</li></ul> |

### 7.3 Community Energy Champions Grants

**Local Government Partnership:** Silicon Valley Energy Watch

**Project Purpose:** All scope items completed and all projects evaluated using Quasi Experimental Design

**Project Scope and Components:** Building on SVEW's 2010-12 Innovator Pilot, SVEW operated a second round of outreach grants designed to dramatically expand participation in utility-funded energy efficiency programs, and to build the capacity of local organizations and non-profit agencies to deliver those resources to targeted local communities.

**Deliverables:**

- Grantee work scope items completed
- Number of customers engaged
- Savings/behavior changes tracked and assessed relative to control groups

**Date Initiated:** Jan 2013

**Date Completed:** Dec 2014

**Original Budget (Cumulative):** \$310,000

**Final Cost (Cumulative):** \$304,165

**Local Match Contribution:** \$0

**Use of Unspent Funds:** Unspent

**Project Reimbursed for LG Staff Time (Y/N):** Y – LGP Implementer staff time.

#### Best Practices

- Programs that identify and target a specific or underserved community through innovative outreach engagement strategies; these programs have shown to be more successful than other strategies.
- Programs that encompass energy efficiency within a broader sustainability framework.
- Programs that address ongoing implementation beyond the grant will be more successful.

#### Lessons Learned

- Members of disenfranchised communities often trust community-based organizations



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(CBOs) more than government or utility staff to deliver messaging and culturally-appropriate programing.

- CBOs are able to adapt and address barriers to participation in energy programs. CBOs are experts in reaching diverse and hard-to-reach markets with low-cost program delivery methods.
- People may relate better to energy efficiency messages that are presented within a unifying concept promoted by CBOs.

### Knowledge Transferred

- Knowledge has been transferred to the individuals working for and with the CBOs implementing the grants and those directly benefiting from the program.
- Information about the grants is available on the SVEW webpage.
- A press release about the grants was sent out.
- A program handbook about the grant results and program overview was created and distributed.
- SVEW staff shared the grant report with Local Government Commission staff for additional targeted distribution to Energy Watch programs statewide.

### Benefit to Local Government

- Program provides an effective implementation outlet for city efficiency efforts; members of disenfranchised communities often trust CBOs more than government or utility staff to deliver messaging and culturally-appropriate programing.
- Behavioral programs may “prime the pump” for retrofits and measure uptakes by expanding awareness of resources and developing a conservation orientated behavior among participants. This may lead to future participation in other local government programs.
- People may relate better to energy efficiency messages that are presented within a unifying concept promoted by CBOs, such as public health. The importance of energy use is not easily visualized when compared to more obvious needs such as food, medicine, relating energy use to issues that are familiar can be helpful for messaging.

### Benefit to the State

- SVEW staff shared the grant overview and assessment report with Local Government Commission staff for additional targeted distribution to Energy Watch programs statewide.
- Grantees were trained by SVEW staff on statewide energy efficiency goals and objectives to ensure affective dissemination of policy information to members of the community impacted by the grant program.

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### Accomplishments

- Awarded grants to five local governments and non-profits in July 2013.
- Over 2,049 customers were directly engaged. Many program participants were able to then share their knowledge and educated others in the community. For example, teachers were trained and then used what they learned in the classroom; business leaders were trained and then transferred their knowledge to their staff.
- Program yielded 31,450 kWh energy savings attributed to behavior change. Note: Only about half of the grantees were able to track energy savings.
- Grantees submitted their final reports (showing scope completion) and the grant ended December 31, 2014.

### Significant Challenges

- With few exceptions, the campaigns would benefit from extended timeframes to refine strategies. Those with strict internal deadlines tended to do well with short grant timeframes.
- Some grantees had challenges tracking participant success with utility data for multiple reasons: small sample sizes, random selection of control samples and seasonal variability in energy use all contributed to difficulties in producing usable data for statistical inference work.

## 8. Strategic Plan Menu # 2.1.1 – Code Compliance Workshop Attendance

*Local government staff and contract staff attend code compliance workshops offered by the California Energy Commission, utility codes & standards staff, or other local governments with strong compliance records.*

### 8.1 Code Compliance Training

**Local Government Partnership:** Fresno Energy Watch

**Implementer:** City of Fresno

**Project Purpose:** Improve local government energy efficiency and code compliance expertise.

**Project Scope and Components:** The goal of the training is for each local government in Fresno County to have one staff member trained at a workshop focusing on code compliance..

**Deliverables:**

- Number of workshops and attendees.

**Date Initiated:** July 2013

**Date Completed:** Ongoing

**Original Budget (Cumulative):** \$4,000

**Final Cost (Cumulative):** \$4,000

**Local Match Contribution:** None

**Use of Unspent Funds:** N/A

**Project Reimbursed for LG Staff Time (Y/N):** Y – LGP Implementer staff time.

| Best Practices   |
|--|
| <ul style="list-style-type: none"><li>• Ensure consistency in regional code compliance by training at least one compliance representative from each local government in the county.</li><li>• Provide sufficient advance notice to potential participants</li><li>• Schedule training based on sector type</li></ul> |

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- Include visual aids and relevant examples during training to enhance participant engagement. Our presenters used actual examples of how properties were in a better position for resale when done with proper code compliance.
- Provide opportunity to field project-related questions from participants.

### Lessons Learned

- Participant feedback led us to conclude that the builder community, or at least as represented at the trainings, see the code changes as another barrier to doing business in California. Examples were appreciated by the attendees, but on the broader question of compliance, there was a sense of “we have to do this to comply.”

### Knowledge Transferred

- Information is regularly exchanged in a collaborative of LGP implementers across eight (8) Central Valley counties, and during monthly energy watch meetings
- Use new knowledge when preparing for other similar events to mistakes are not duplicated

### Benefit to Local Government

- Helps the local governments building officials and inspectors stay abreast of code changes and try to uniformly apply the code across the region by the different local jurisdictions

### Benefit to the State

- Allows the state mandates to be adhered to, understood and uniformly applied

### Accomplishments

- Six (6) workshops were completed with attendance from building officials, contractors and elected officials, approximately 60 attendees in total.

### Significant Challenges

- Sufficient timing for workshop notifications for best attendance
- Municipalities are low on available labor making it difficult to assure workshop attendance

### 8.2 Building Safety Month

**Local Government Partnership:** Kern Energy Watch Partnership

**Project Purpose:** To improve the Building and Permitting code compliance in partner municipalities.

**Project Scope and Components:** Work with 12 local government partners' (Arvin, Bakersfield, California City, County of Kern, Delano, Maricopa, McFarland, Ridgecrest, Shafter, Taft, Tehachapi, & Wasco) Building and Permitting departments to improve code compliance through public education during the International Code Council's Building Safety Month.

**Deliverables:**

- Number of LGPs participating
- Number of customer entries at each LGP permit window
- Print ad placement

**Date Initiated:** May 2014

**Date Completed:** June 2014

**Original Budget (Cumulative):** \$4,000

**Final Cost (Cumulative):** \$

**Local Match Contribution:** \$

**Use of Unspent Funds:**

**Project Reimbursed for LG Staff Time (Y/N):** Y – LGP Implementer staff time.

| Best Practices   |
|--|
| <ul style="list-style-type: none"><li>• Educate local government staff about the importance of code compliance, including energy code, at a time of year when code compliance staff are highly engaged in code-related topics.</li></ul> |

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### Lessons Learned

- None Reported

### Knowledge Transferred

- Building department staff from each of the 12 area local governments attended meetings with the Energy Watch to discuss code compliance and available resources.

### Benefit to Local Government

- Local government partners benefitted by having a resource available to their Building Department staff to receive updated training locally. The outreach efforts in support of Building Safety Month increase the public's awareness of the need for including energy efficiency in the construction and permitting processes.

### Benefit to the State

- Increased awareness of the need to include energy efficiency in the construction and permitting processes ensures that new and updated construction projects are being built with energy efficiency in mind. If local governments are doing their parts to inform the public and provide resources to help them move towards greater energy efficiency, those efforts ultimately support the statewide energy efficiency efforts.

### Accomplishments

- All 12 LGPs participated in Building Safety Month
- Ads were placed in all local newspapers
- The County of Kern, the cities of Arvin, Delano, Shafter and Taft proclaimed Building Safety Month.
- The County of Kern offered an updated energy code training in March 2014.
- Daily facts were posted to the Kern Energy Watch website.
- Each local partners was provided with a kit of materials for their planning department or other public windows.

### Significant Challenges

- None reported.

### 8.3 Code Compliance Training

**Local Government Partnership:** Napa County Energy Watch

**Project Purpose:** Educate and inform practitioners about new Title 24 energy efficiency standards and methods to comply with code; target audience to include contractors and local staff involved in planning, permit review and approval

**Project Scope and Components:** Develop and offer two workshops covering changes in Title 24, with special emphasis on lighting

**Deliverables:**

- General workshop on Title 24 compliance changes
- Focused workshop on Title 24 compliance changes with special attention to lighting and strategies for achieving code compliance and cost-effective energy efficiency upgrades

**Date Initiated:** March 2013

**Date Completed:** March 2014

**Original Budget (Cumulative):** \$11,750 (\$8,000 in 2013-2014; \$3,750 in 2015)

**Final Cost (Cumulative):** \$7,652

**Local Match Contribution:** None

**Use of Unspent Funds:** Returned to PG&E

**Project Reimbursed for LG Staff Time (Y/N):** Y – LGP Implementer staff time.

#### Best Practices

- Supplementing classroom training with live feed on-line access

#### Lessons Learned

- For small jurisdictions, classroom training is not the best venue for getting and holding attention of practitioners and staff
- In this area, audiences become engaged only when they have a specific problem to solve
- A more specific focus and in-depth expertise on how to address new challenges is more appealing than survey information

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### Knowledge Transferred

- Comments offered in PG&E meetings

### Benefit to Local Government

- Staff better informed, especially about lighting issues
- Practitioners better informed, will be smarter in permitting process

### Benefit to the State

- As above for local government

### Accomplishments

- Two (2) workshops delivered
- Participant community lighting expertise enhanced
- Lesson learned were identified regarding classroom versus online training

### Significant Challenges

- Small jurisdictions: difficult to get overstretched staff free for training
- Audiences tend to pay attention to instruction that is relevant to an immediate problem; hence, the on line ACE tool is a better resource than classroom sessions



## **9. Strategic Plan Menu # 2.1.2 – Code Compliance and Enforcement**

*Redesign enforcement, compliance, plan review processes; introduce new forms and templates.*

### **9.1 Title 24 Permitting**

**Local Government Partnership:** East Bay Energy Watch

**Implementer:** QuEST

**Project Purpose:** Develop tools to streamline submittal, review and approval of energy efficiency projects.

**Project Scope and Components:**

This project spanned two years and separate funding cycles.

2014: Conduct baseline survey of local government permitting processes. Develop tools to streamline the review and approval of EEMs that trigger 2013 Title 24, Part 6 Energy Code.

2015: A new scope of work was developed for 2015, including: 1. Provide a 'hotline' for SMB installation contractors to call or e-mail in the event they have questions about Title 24, Part 6 Energy Code. 2. Conducting interviews with SMB contractors to assess and improve the value and impact of their relationship with EBEW. 3. Provide an analysis of EBEW's alignment with state energy policy objectives.

**Deliverables:**

- 2014: Survey findings;
- 2015: Record of code-related challenges and barriers to implementation encountered by contractors, and recommendations to the EBEW Strategic Advisory Committee to provide additional/continuous contractor support; Analysis of interview feedback from SMB contractors and recommendations to EBEW Strategic Advisory Committee; Analysis of EBEW program models and state energy policy objectives

**Date Initiated:** 2/2014

**Date Completed:** 12/31/2015

**Original Budget (Cumulative): \$44,500** (2014: \$9,500; 2015: \$35,000)

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**Final Cost (Cumulative): \$39,785.53** (2014: \$7,555.53; 2015: \$32,230)

**Local Match Contribution:** \$0

**Use of Unspent Funds:** Unspent

**Project Reimbursed for LG Staff Time (Y/N):** N – Implementer is not LG

### Best Practices

- Identify similarities and differences between area local government permitting policies to better understand current conditions.
- Assess area local government permitting policy alignment with state standards.
- Understand how the contractor community interprets and adheres to energy codes.

### Lessons Learned

- Title 24 Permit Streamlining: The six local governments who participated in the permitting process survey provided diverse responses about their permitting processes. This reflected the true nature of how energy code impacts local governments differently, and of attitudes toward energy code.
- Direct Install Contractor Interviews: open lines of communication must be maintained throughout all phases of SMB DI programs and across all partners to maximize the sales efforts of contractors, who have the responsibility of installing energy saving projects for the East Bay Energy Watch and also for the task of operating a profitable business.
- DI Contractor Hotline: Such a resource should be made available for help addressing issues related to energy code, particularly as a new code cycle begins. Contractors commonly find themselves at a project site or a permitting desk needing answers to specific questions.
- Policy Analysis: Significant opportunities to improve Partnerships may be identified by aligning program models with statewide goals.

### Knowledge Transferred

- All findings from these projects were presented to the East Bay Energy Watch Strategic Advisory Committee.
- Contractors working within the Marin Energy Watch Partnership were also offered assistance via the DI Contractor Hotline, but there was no participation.

### Benefit to Local Government

- All of these projects were aimed at gaining understanding of how to work more effectively

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as East Bay Energy Watch partners:

- For contractors, understanding some intricacies and internal policies of East Bay local permitting processes; and having greater access to expert assistance if needed to navigate code-related questions.
- For implementers, understanding the constraints, challenges, and business models of contractors working hard to install projects to achieve energy savings.
- For local governments, understanding the program models and best practices implemented to bring the most benefit to their communities.

### Benefit to the State

- A deeper understanding of each partner's goals and objectives, how they align with each other, and how they align with the State's, will build capacity for more effective Partnerships.

### Accomplishments

- Title 24 Permitting
  - Staff developed an online survey mechanism designed to collect information about local building department resources, permit fees and code triggers, and application of code and the permit process to project scenarios.
  - Staff administered survey to six local governments and its results were presented to the EBEW Strategic Advisory Committee. Since it was the only central repository of such information reflecting East Bay permitting practices, this project received additional funding to collect additional responses from building departments.
- Contractor Interviews
  - Staff conducted telephone interviews with 9 leading EBEW SMB DI contractors, wherein contractors were asked approximately 30 questions to define the challenges to sales and implementation in the field. The EBEW SAC was presented with results and recommendations that were largely centered around increased communication with DI program staff to stay ahead of Title 24 impacts.
- Title 24 Hotline
  - The code helpline was not widely used. This was interpreted as an issue of timing: the current code cycle had been active for more than one year, so contractors who already figured out how to work around Title 24 likely decided to continue doing so. This was confirmed to an extent by interviews with contractors, some of whom claimed they avoided Title 24 projects altogether.

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- Policy Analysis
  - Produced policy analysis document

### Significant Challenges

- The most significant challenge of this body of work was aligning objectives with the Statewide Codes and Standards Team, who became a partner later on in 2014 after the survey had been completed.

### 9.2 To Code Pilot for HVAC Change outs

**Local Government Partnership:** Fresno Energy Watch

**Implementer:** City of Fresno

**Project Purpose:** 50% increase in number of permits pulled for HVAC change out

**Project Scope and Components:** Fresno Energy Watch will work with (4) other jurisdictions in Fresno County and Home Depot to promote and enforce HVAC change-out work to code and ensure permits are pulled.

**Deliverables:**

- Number of permits pulled for HVAC change out compared to prior years cross-referenced with number of HVAC units sold to contractors

**Date Initiated:** July 2013

**Date Completed:** Ongoing

**Original Budget (Cumulative):** \$60,000

**Final Cost (Cumulative):** \$5,000

**Local Match Contribution:** None

**Use of Unspent Funds:** Unspent \$55,000, reallocated to the Home Energy Tune Up (HETU) program.

**Project Reimbursed for LG Staff Time (Y/N):** Y – LGP Implementer staff time.

#### Best Practices

- Leverage Local Government channels for disseminating information to participants
- Show concern for safety and health of participants not complying with appropriate permitting requirements.

#### Lessons Learned

- Target program delivery channels with vested or financial interest in the incentive
- Provide ongoing training updates on a regular basis

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### Knowledge Transferred

- Information exchange was performed through occasional phone conference calls during program updates.
- Knowledge was also transferred during occasional in person meetings to address deeper uptake issues.

### Benefit to Local Government

- The LG benefits from providing a safe living condition for the residents
- The residents will profit from an authorized well designed installation that has met the appropriate permit requirements.

### Benefit to the State

- This activity promotes adherence to policies including title 24 as applicable.

### Accomplishments

- The LGP assisted PG&E by securing local government participation in the PG&E HVAC Pilot; four local governments were selected for the pilot: City of Clovis, City of Madera, City of Fresno and Fresno County.
- The LGP helped improve the design of PG&E's HVAC pilot program by facilitating conversations with LGs and customers, and by establishing use cases.

### Significant Challenges

- Contractor acceptance
- Suppliers struggled to see value in the program for fear of it becoming a "policing" action by the LGs, PG&E or the state
- Home owners need a more direct approach and consistent

## **10. Strategic Plan Menu # 3.1.1 – Local Government Benchmarking Policies**

*Develop energy benchmarking policies and procedures to enable ongoing benchmarking of all local government facilities.*

### **10.1 Benchmarking and My Energy Enrollment**

**Local Government Partnership:** East Bay Energy Watch

**Implementer:** QuEST

**Project Purpose:** All local governments have access to current energy data and summaries of energy performance to be made available to decision makers.

**Project Scope and Components:** EBEW will make a benchmarking agent available to city staff to benchmark all applicable municipal buildings. This program includes the following:

- Training in ENERGY STAR Portfolio Manager
- Data entry and site visits
- Enrollment in PG&E's Automated Benchmarking Service (ABS)
- Narrative reports and/or presentations of results and next steps
- Enrollment in PG&E's My Energy account management tool.

**Deliverables:**

- Number of new Local Gov't benchmarking policies/procedures

**Date Initiated:** 6/26/2013

**Date Completed:** 12/31/2014

**Original Budget (Cumulative):** \$90,000

**Final Cost (Cumulative):** \$89,975.49

**Local Match Contribution:** \$0

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**Use of Unspent Funds:** Unspent

**Project Reimbursed for LG Staff Time (Y/N):** N – Implementer is not LG

### Best Practices

- Local governments receiving Energy Star Portfolio Manager training and technical assistance with benchmarking will be better prepared to engage building owners in their community who may be impacted by AB 1103.
- Portfolio Manager is an industry-standard web platform that local governments should use to organize building energy data, to prioritize buildings for targeted audits and improvements, and to report out on energy use trends and progress toward emissions goals.
- PG&E's MyEnergy tool provides online account management capabilities that some local governments may find convenient. This is also the simplest way to access to rates and tariffs, daily interval data trends, and Green Button data when necessary.

### Lessons Learned

- Large local governments controlling hundreds of utility accounts were not always eligible to use MyEnergy, due to technical constraints of PG&E's database. Though this was inconvenient, Portfolio Manager served a complementary role so it was not considered to be a serious setback.
- The vast majority of local governments do not have dedicated staff for energy efficiency activities, so the management of benchmarking data fell to QuEST (implementer). By the end of the program, proficiency with Portfolio Manager was limited to a handful of users but there were numerous occasions where the data itself could be put to use, as mentioned in Best Practices.

### Knowledge Transferred

- Best practices and lessons learned from this activity were later applied to numerous regional businesses, who were interested in benchmarking as a baselining activity, or who were to be impacted by local building energy performance ordinances.
- After its staff had been trained to benchmark buildings, the City of Hayward conducted outreach and training to a subset of commercial real estate stakeholders.

### Benefit to Local Government

- Local governments which were benchmarked also received training and a report of



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benchmarking results that could be used by other program implementers to target buildings for improvements and energy savings.

### Benefit to the State

- East Bay local governments demonstrate energy leadership to their communities by conducting Energy Star benchmarking, and by using the results to investigate energy saving opportunities in their buildings.

### Accomplishments

- Narrative reports of benchmarking results delivered to 10 local governments.
- Provided on-site training in Portfolio Manager to two local governments.
  - City of Martinez
  - City of Piedmont
- Benchmarking data was valuable in building a partnership with a PG&E third-party remote building analytics program.
- Local governments were interested in using their benchmarking data to explore the energy performance of their buildings.

### Significant Challenges

- The most significant obstacle to independence and proficiency with energy management tools like Portfolio Manager is limited staff time. Without SER funding and Partnership programming, this project would not have been possible for the majority of participating governments.
- Database structure and meter authorization protocol were revised several times, both for PG&E and Energy Star Portfolio Manager, resulting in a number of interruptions to regular data upload and sometimes delaying data analysis.

### 10.2 Energy Benchmarking Policies and Procedures

**Local Government Partnership:** Fresno Energy Watch

**Implementer:** City of Fresno

**Project Purpose:** Provide local governments the resources necessary to adopt benchmarking policies/procedures

**Project Scope and Components:** Each local government in Fresno County, a total of 15, adopts energy benchmarking policies and procedures to enable ongoing benchmarking of all local government facilities..

**Deliverables:**

- Number of new Local Gov't benchmarking policies/procedures.

**Date Initiated:** July 2013

**Date Completed:** Ongoing

**Original Budget (Cumulative):** \$10,000

**Final Cost (Cumulative):** \$5,000

**Local Match Contribution:** None

**Use of Unspent Funds:** Unspent, \$5,000, reallocated to the Home Energy Tune Up (HETU) program.

**Project Reimbursed for LG Staff Time (Y/N):** Y – LGP Implementer staff time.

#### Best Practices

- Promote benchmarking, primarily for local governments, at workshops
- Provide examples and details on benefits of benchmarking

#### Lessons Learned

- Try to obtain benchmarking program flyer for distribution prior to event to encourage participation

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### Knowledge Transferred

- During regular meetings of Central Valley LGP collaborative or energy watch meetings, share information gained through the engagement on benchmarking

### Benefit to Local Government

- Benchmarking allows local governments to better manage their assets through energy and resource conservation

### Benefit to the State

- Local Governments meeting their target energy and resource consumption targets

### Accomplishments

- The CVETU program successfully benchmarked approximately 7 municipal locations and engaged each municipality to provide benchmark results and review recommendations

### Significant Challenges

- Municipalities are very difficult to bring to the table due to shortage of personnel and are traditionally dealing with multiple competing priorities which make the benchmarking training difficult to proposition.

## **10.3 Benchmarking Facilities for Management and Inventory of Facilities**

**Local Government Partnership:** Kern Energy Watch Partnership

**Project Purpose:** To get KEW Local Government Partners portfolios benchmarked and enrolled in and utilizing an Automated Benchmarking System.

**Project Scope and Components:** Enroll each of the 12 local government partners in the automated benchmarking system provided by the US EPA Energy Star Program and provide local governments with US EPA and/or local recognition as qualified. The 12 area local governments include Arvin, Bakersfield, California City, County of Kern, Delano, Maricopa, McFarland, Ridgecrest, Shafter, Taft, Tehachapi, & Wasco.

**Deliverables:**

- Number of new local government benchmarking policies/procedures.

**Date Initiated:** November 2013

**Date Completed:** November 2014

**Original Budget (Cumulative):** \$2,500

**Final Cost (Cumulative):** \$

**Local Match Contribution:** \$

**Use of Unspent Funds:**

**Project Reimbursed for LG Staff Time (Y/N):** Y – LGP Implementer staff time.

### **Best Practices**

- Energy Star Portfolio manager is the leading interactive resource management tool that enables LGPs to assess energy usage across their entire portfolio of buildings. It allows LGPs to set baselines and identify which building to target for setting goals and tracking improvements over time. It also allows LGPs to get recognition from the EPA for their efforts.

### **Lessons Learned**

- None reported

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### Knowledge Transferred

- Local governments were provided benchmarking training and reports for future decision making related to energy efficiency.

### Benefit to Local Government

- Local governments that completed the benchmarking now have comparative data to use when making business decisions. The ability to assess and track their facilities over time is of great benefit to LGPs as they continually update their plans for ongoing maintenance of their facilities. The automatic downloading of their data and updating of their Energy Star scores provide them with hands on real time data to use when making business decisions about facilities.

### Benefit to the State

- A local government's ability to have real time up to date information about how their facilities are operating allows them to make business decisions , supported by data, to ensure that their facilities are operating at the most energy efficient level possible. It allows them to plan over time.

### Accomplishments

- Promoted non-LGP sponsored benchmarking workshops provided by the US EPA to provide area local governments with benchmarking training
- Approximately half of the area local government facilities (110 out of 220) were benchmarked.

### Significant Challenges

- None reported

### 10.4 Benchmarking

**Local Government Partnership:** Marin County Energy Watch

**Project Purpose:** Assist the County and four (4) agencies with benchmarking activities for municipal facilities.

**Project Scope and Components:** MCEW will work with public agency staff to benchmark their facilities. MCEW will compile as much data as possible for the agency staff and will create a tool kit spreadsheet to assist them with the collection of outstanding data points such as number of employees and number of PCs.

**Deliverables:**

- Number of agencies completing benchmarking of their eligible facilities

**Date Initiated:** August 2012

**Date Completed:** March 2015

**Original Budget (Cumulative):** \$ 20,000

**Final Cost (Cumulative):** \$ 10,596

**Local Match Contribution:** None

**Use of Unspent Funds:** Unspent

**Project Reimbursed for LG Staff Time (Y/N):** Y – LGP Implementer staff time.

#### Best Practices

- Assist public agencies with tracking and understanding their energy usage.
- Remove the barrier of lack of staff time by doing most of the work for them.

#### Lessons Learned

- Despite the assistance the LGP provided, agency staff was reluctant to spend time collecting the additional data to benchmark their facility.
- Need better messaging on the value of benchmarking.
- Presenting benchmarking as a solution to a specific or relevant need, rather than offering benchmarking as a stand-alone service, would likely increase uptake.
- Helps to identify a trigger event such as Prop 39 applications where benchmarking is

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helpful/needed.

### Knowledge Transferred

- Information was shared with IOUs and other LGP implementers on Prop 39 Task force calls

### Benefit to Local Government

- Assisted the County with achieving Energy Star recognition for its Civic Center
- Helped local school districts meet requirements for Prop 39 applications

### Benefit to the State

- Helped school districts fulfill requirements for Prop 39 applications and several are in the process of installing energy efficiency projects as a result

### Accomplishments

- Completed benchmarking for County and City of San Rafael facilities
- Developed data collection tool and set up Portfolio Manager systems for 11 cities/towns
- Completed CEC benchmarking for 15 school districts

### Significant Challenges

- Agency staff was not interested in collecting site specific data to complete Portfolio Manager benchmarking. It was a low priority item that kept getting pushed down due to other priorities.

### 10.5 Benchmarking Local Government Buildings

**Local Government Partnership:** Mendo-Lake Energy Watch

**Project Purpose:** Benchmark local government facilities in Mendocino and Lake Counties

**Project Scope and Components:** To work with city/county decision makers and leverage LGO inventory/future CAP to prioritize benchmarking policies and procedures. Host trainings to aid city/county staff in building capacity to implement benchmarking procedures.

**Deliverables:**

- Benchmark all local government facilities in Mendocino and Lake Counties.
- Train local government staff in benchmarking procedures and techniques so energy efficiency expertise, especially related to building energy usage, becomes business as usual.

**Date Initiated:** January 2013

**Date Completed:** Not yet completed

**Original Budget (Cumulative):** Approximately \$20,000

**Final Cost (Cumulative):** N/A – not yet completed

**Local Match Contribution:** N/A

**Use of Unspent Funds:** SER funds were utilized for schools support efforts, primarily for technical assistance with direct installation energy efficiency projects.

**Project Reimbursed for LG Staff Time (Y/N):** Y – for LG staff at Mendo-Lake Energy Watch.  
N – for LG staff at stakeholder jurisdictions.

#### Best Practices

- It is best to approach key energy champions and facilities/finance directors as an early part of implementation.

#### Lessons Learned

- Benchmarking is usually not a priority for LG staff. Relationship building is thus a key element of program success.



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- Rural LGs do not necessarily have a complete list of facilities. Benchmarking staff should plan at least 3-4 months in an implementation timeline for research and data gathering towards a complete list of all facilities.

### Knowledge Transferred

- The LGP has shared its experience in quarterly Rural Hard to Reach (RHTR) meetings with other LGPs and the CPUC.

### Benefit to Local Government

- Through the benchmarking of 40 Local Government buildings, the Local Government building are able to assess their building's energy usage, and implement policies and procedures to enable ongoing reduction of energy consumption.

### Benefit to the State

- The benchmarking activities helped to further the State's goal of benchmarking all Local Government buildings.

### Accomplishments

- 40 county buildings were benchmarked for the County of Mendocino.

### Significant Challenges

- The LGP offered benchmarking services to all local governments in Mendocino County. However, teach local government lacked a comprehensive list of all facilities, which made it difficult to offer a comprehensive benchmarking service. The scope was adjusted to focus on the County of Mendocino alone considering the amount of unanticipated work required to create an inventory of facilities.
- Benchmarking often involves working with both the facilities division for building specifications and locations- and the finance division for questions on utilities bills. Often one or both of these divisions sees benchmarking as a low priority.

### 10.6 Benchmarking

**Local Government Partnership:** Redwood Coast Energy Watch

**Project Purpose:** Benchmarking

**Project Scope and Components:** Provide local governments with benchmarking technical assistance to help them understand and monitor building energy consumption trends.

**Deliverables:** Number of new Local Gov't facilities benchmarked. Note: Additional non-Energy Watch funds are being leveraged for this activity not included in the budget listed under column D.

**Date Initiated:** January 2013

**Date Completed:** on-going

**Original Budget (Cumulative):** \$35,000

**Final Cost (Cumulative):** See Appendix A, Table 1, for 2013 Energy Watch benchmarking costs. Table 2 (Appendix A) models the change in SER categories for 2015. Benchmarking was categorized under ZNE, Climate and Energy Planning and Prop 39 as appropriate. Fiscal/time tracking was not done at a task level but rather at a SER category level. This was also discussed moving into 2015 regarding flexibility and adaptability to changing opportunities in the political sphere. However, RCEA did, to the best of our ability, expend to the SPM budget metric of \$35,000.

**Local Match Contribution:** Prop 39 match dollars were not tracked at the task level. Prop 39 Energy Management service contracts leveraged against Energy Watch implementation and SER efforts varies by fiscal year but has been hovering around \$125,000/year beginning in fiscal year 2013/14. The duration of the funding is five years. Prop 39 Energy Management contracts do not track time at the task level. Benchmarking was the first step in better understanding each LEA's portfolio. Benchmarking/use analysis is also occurs for Prop 39 Expenditure Plan submittal. LEAs must submit the previous fiscal year benchmark with a plan. Should PG&E want additional contracts and matches to be tracked at a specific level that benefits reporting this should be revisited. LEA Benchmarking was largely supported by Prop 39 funding in 2014. LEA Benchmarking also provided an opportunity to craft a value proposition to LGs.

Additional match dollars were provided by HSU as a sub-contract to a Trinidad Rancheria effort that spanned several Energy Watch SER activities. \$1,650 is considered match for Benchmarking, GHG inventories and technical assistance. More information and/or scoping statements may be shared on request.

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**Use of Unspent Funds:** None, when considering 2013-2015 cycle

**Project Reimbursed for LG Staff Time (Y/N):** Y – LGP implementer staff time.

### Best Practices

- Scale and aggregate Benchmarking policies and procedures at RCEA as a JPA
- Use policies and procedures to guide benchmarking activities for as many Humboldt County LGs as possible
- Collect comprehensive end use information
- Use Energy Star's Portfolio Manager
- Ensure LGs and staff are educated on Portfolio Manager and how MyEnergy can be used in tandem

### Lessons Learned

- Scaled and aggregated benchmarking policies and procedures work for small LGs and special districts but may be more challenging for larger LGs with complex portfolios.
- Collecting comprehensive end use information and putting it into Portfolio Manager was cost prohibitive for RCEW and for the LGs. Scaled back to focus on only the information needed to calculate Energy Use Intensities (EUIs) and or the solutions the LG expressed as important.
- Portfolio Manager is not a perfect tool but it provides a great centralized location to collect, analyze and review benchmark data for LG portfolio holdings.
- Scaling was challenging, Proposition 39 gave our team an opportunity to tool up and provide a real value add to LGs through benchmarking. These lessons were then scaled and duplicated for larger LGs.
- Make sure to couple Portfolio Manager to MyEnergy as the tools have different uses and value--they provide information at different analytical levels. For example, Portfolio Manager gives a global view and monthly data points; MyEnergy focuses on meters and can in most cases provide 15 minute interval data. Thus when an observation is made, high use in a specific month, MyEnergy can be used to look at when that energy was used at the 15 minute interval—inferences can be made and use can be investigated.

### Knowledge Transferred

- The LGP's benchmarking efforts continue today. Beyond informal conversations at GCP meetings and SEEC, mostly focused on Prop 39, the LGP has not aggressively pursued sharing; the LGP is still trying to figure out how to scale and replicate across multiple different LGs.

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### Benefit to Local Government

- Leveraging Prop 39 dollars with ratepayer dollars allowed RCEA to develop a model that seems to work at a very attractive value to both the ratepayer and taxpayer—specific to schools.
- Using lessons learned, particularly regarding scaling the activity, allowed us to Benchmark City of Fortuna in a cost effective fashion. That effort is now being used to prioritize activities based on energy use intensities. Aggregating all meters into one location affords easier fiscal tracking of energy costs across facilities.
- Benchmark data and Energy Use Intensities allow LGs to quickly measure use over years. This allows for quick analysis of how facilities are performing over time— inferences can be made and use/potential efficiency measures can be investigated as appropriate.
- Benchmark data gives a global view of a portfolio, when a meter/building's use raises a yellow flag, LGs can investigate use in greater detail by using MyEnergy.

### Benefit to the State

- By informing how to best implement EE measures to maximize fiscal and energy savings.
- By providing LG staff an opportunity to become more familiar with readily available energy related tools and information.
- Providing LG staff with energy use information that can help with operational and budgetary decisions beyond prioritizing EE measures.
- By affording LG staff an opportunity to lead by example.

### Accomplishments

- Benchmarked facilities at 26 Local Educational Agencies.
- Benchmarked a significant portion of County of Humboldt owned facilities, finishing in 2016; began using Benchmark data to prioritize efforts over time.
- Benchmarked City of Fortuna; Used and continued to use benchmark data to prioritize efforts.
- Benchmarked City of Ferndale
- Benchmarked Trinidad Rancheria. Cher-Ae Heights Indian Community of the Trinidad Rancheria is a federally recognized tribe located near the City of Trinidad, California.
- Produced draft RCEA (LG) internal process and policy statements regarding benchmarking.
- Produced draft process statements for LGs regarding using Portfolio Manager and MyEnergy.
- Staged to continue efforts and finalize Policies and processes moving into 2016.

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### Significant Challenges

- LG staff buy-in; many rural LG officials have different roles and this activity added responsibilities. Expressed LG opportunity costs mitigated participation.
- Finding the right LG staff member for collaboration
- Defining the scope of benchmarking; to what extent and what is the value-add to ensure value exceeds opportunity costs

### 10.7 Portfolio Manager Accounts for Municipal Buildings

**Local Government Partnership:** San Luis Obispo Energy Watch Partnership

**Project Purpose:** Set up 6 benchmarking systems and policies

**Project Scope and Components:** Set up Portfolio Manager Accounts for 6 municipalities to track energy usage..

**Deliverables:**

- 6 benchmarking systems and policies set up.

**Date Initiated:** January, 2013

**Date Completed:** November, 2014

**Original Budget (Cumulative):** \$20,000

**Final Cost (Cumulative):** Individual project expenditures were not tracked until 2015

**Local Match Contribution:** \$N/A

**Use of Unspent Funds:** N/A

**Project Reimbursed for LG Staff Time (Y/N):** Y – LGP Implementer staff time.

#### Best Practices

- Establish a foundation and structure for ongoing monitoring and reporting of building and facility energy use, cost, etc. This includes but is not limited to customer engagement around value of benchmarking, education on using and populating tool, structure for primary and supplemental data needs, interfacing with IOU staff, reporting requirements, etc.

#### Lessons Learned

- Engaging local government agencies in SLO County – as in other rural and hard to reach regions is very challenging. None of the LGP's partners – including all of the incorporated cities have dedicated energy or climate staff. Moreover energy and climate are not priorities. As a result, it is difficult to establish buy in for this work, to persuade staff to dedicate time to it, and to fully leverage the data and analysis gained from it.
- The key to engaging local government agencies in the LGP's region is first and foremost

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about talking money and ways to save money. Second it is about improving operations and making the lives of staff who maintain and work in buildings easier.

### Knowledge Transferred

- The main way knowledge was transferred was by taking lessons learned from one jurisdiction and applying it when engaging a subsequent jurisdiction. It is largely about meeting the customer when and where they are; understanding their challenges, and trying to help them out.
- The second way that knowledge was transferred was to other programs and customer segments – specifically Special Districts/CSDs - that were likely to face similar challenges or have similar needs.

### Benefit to Local Government

- For the majority of the local government agencies served by SLO Energy Watch, this effort was their first glimpse at comprehensive energy data. For many, it was helpful for them to see their use and cost over time, energy use intensity, etc. It's also a starting point for more targeted EE efforts.

### Benefit to the State

- First and foremost, it's about engaging and educating customers – in this case local government agencies re: their energy use, cost, etc. and ways to save energy and money.
- Second, for some local government agencies, this work was connected to EE projects. For many, that started with engaging the LGP's Direct Install program. For others, it was larger projects engaging other IOU programs. At the end of the day, it all leads to energy savings and that benefits the customer and the state.

### Accomplishments

- All incorporated jurisdictions were engaged re: their interest in participating in a benchmarking project.
- Portfolio Manager Accounts were set up for County of San Luis Obispo, City of San Luis Obispo, City of Arroyo Grande, Morro Bay, and City of Atascadero.
- Data was collected, analyzed, and reported to all participating Cities.
- Portfolio Manager Accounts were set up for nine participating Special Districts in the second half of 2014 and early 2015 as a dedicated CSD Energy Management Program was developed and implemented.

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### Significant Challenges

- Engaging local government agencies in SLO County – as in other rural and hard to reach regions is very challenging. None of the LGP’s partners – including all of the incorporated cities have dedicated energy or climate staff. Moreover energy and climate are not priorities. As a result, it is difficult to establish buy in for this work, to persuade staff to dedicate time to it, and to fully leverage the data and analysis gained from it.
- Not all customers were interested in participating.
- Some customers were interested in participating, but did not provide data or collaborate during the process.
- SLO Energy Watch budget and staffing constraints and turnover made implementing this project with consistency over time a challenge, particularly as everyone needs to be trained. That is a challenge not only to the implementer, but also to the customer.



### 10.8 Portfolio Manager Account Usage Guide

**Local Government Partnership:** San Luis Obispo Energy Watch Partnership

**Project Purpose:** Create a Portfolio Manager User Guide

**Project Scope and Components:** Develop a guide for the set up and use of Portfolio Manager Accounts..

**Deliverables:**

- Guidebook

**Date Initiated:** Jan/2013

**Date Completed:** June/2014

**Original Budget (Cumulative):** \$7,500

**Final Cost (Cumulative):** Individual project expenditures were not tracked until 2015

**Local Match Contribution:** \$N/A

**Use of Unspent Funds:** N/A

**Project Reimbursed for LG Staff Time (Y/N):** Y – LGP Implementer staff time.

#### Best Practices

- Create customized and user friendly documents that better serve the needs of your customers, programs, and staff.
- Make software programs accessible to everyone.

#### Lessons Learned

- Portfolio Manager is used differently by different customers and teams.
- Portfolio Manager has glitches and idiosyncrasies.
- Portfolio Manager is not understood and supported comprehensively or consistently by IOUs.
- There is a lot of customized support work to be done and documents to be created that make a customer's interface with Portfolio Manager easier.
- Batch uploads are key.

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### Knowledge Transferred

- The main way knowledge was transferred was by applying it to future customers, programs, and projects involving benchmarking. More than anything, it's about customers and meeting the customer when and where they are; understanding their challenges, and trying to help them out.

### Benefit to Local Government

- Portfolio Manager is a tool that enables us to provide initial value to local government customers. It is simply a mechanism by which to collect, analyze, and report data, thereby providing high level understanding and glimpse into the what, where, why, how much, etc. of energy use and cost, GHGs, etc.

### Benefit to the State

- First and foremost, it's about engaging and educating customers – in this case local government agencies re: their energy use, cost, etc. and ways to save energy and money.

### Accomplishments

- A Portfolio Manager User Guide was created.
- The guide continues to be used and improved upon for other applications, customers, and projects.

### Significant Challenges

- For the vast majority of jurisdictions in a rural county such as this, using Portfolio Manager is not about benchmarking because few of the buildings are large enough to benefit from normalized climate data; nor are they large enough to receive energy scores and rankings.
- Portfolio Manager is used differently by different customers and teams.
- Portfolio Manager has glitches and idiosyncrasies.
- Portfolio Manager is not understood and supported comprehensively or consistently by IOUs.
- There is a lot of customized support work to be done and documents to be created that make a customer's interface with Portfolio Manager easier.

### 10.1 Guadalupe Benchmarking

**Local Government Partnership:** Santa Barbara County Energy Watch Partnership

**Project Purpose:** Benchmarking of the municipal buildings

**Project Scope and Components:** Partnership will provide benchmarking options to Guadalupe through the County of San Luis Obispo, which handled benchmarking in San Luis Obispo County.

**Deliverables:**

- Meetings with Mayor and City Manager to set up and explain the Santa Barbara Energy Watch Partnership goals and programs.
- Original walk through and coordination with San Luis Obispo County.
- After the initial meetings, handshake and site visits, the benchmarking process did not move forward due to other municipal priorities, staffing issues and financial challenges.

**Date Initiated:** 01/2013

**Date Completed:** 12/2013

**Original Budget (Cumulative):** \$14,000

**Final Cost (Cumulative):** \$0

**Local Match Contribution:** \$ 0

**Use of Unspent Funds:** Funds redirected to Santa Barbara County

**Project Reimbursed for LG Staff Time:** N – Implementer is not LG

#### Best Practices

- After the initial handshake and walkthrough meetings, unable to achieve benchmarking. City staffing, priorities, and difficulty in coordinating.
- Assistance offered to Guadalupe for benchmarking services.
- County of San Luis Obispo offered to spearhead this assistance.
- Santa Barbara County not offering assistance

#### Lessons Learned

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- Small city financing, staffing and priorities hindered the effort to coordinate benchmarking assistance.
- San Luis Obispo County willing to step in when Santa Barbara County would not enhance its involvement.

### Knowledge Transferred

- Municipalities do monitor their buildings using their own systems.
- Municipalities do stay in touch with their utility representatives for energy reviews and opportunities.

### Benefit to Local Government

- Benchmarking assistance was offered to Guadalupe. They understand the continuing need for energy efficiency. They know they can contact the Partnership or utility companies for assistance. They have their own system for monitoring energy use at their facilities.

### Benefit to the State

- The state gained by having a resource ready to assist the municipality if and when they proceed with benchmarking in coordination with the utility companies.

### Accomplishments

- While benchmarking was not accomplished, the exercise underscored the ability to provide assistance to the municipality upon request.

### Significant Challenges

- It is difficult to secure the commitment for benchmarking from a small, financially challenged city with staffing shortages and challenging priorities. While the Partnership was prepared to assist in cost and manpower, it was still required city staff and project priority to achieve the result.

### 10.2 City of Santa Maria Benchmarking

**Local Government Partnership:** [Santa Barbara County Energy Watch Partnership]

**Project Purpose:** To provide benchmarking assistance to a primary facility in the City of Santa Maria

**Project Scope and Components:** Assisting in the benchmarking of facilities and targeting a primary facility

**Deliverables:**

- The Santa Barbara County Energy Watch Partnership, including representatives from PG&E, So Cal Gas, Chamber of Commerce, and City of Santa Maria, met with the Public Works Director to discuss the resources and programs of the Partnership and to locate a facility for benchmarking with the City of Santa Maria.
- While some buildings were discussed, no specific building was identified.
- Public Works Director changed twice and the Partnership met with each, but there was no resulting benchmarking program.

**Date Initiated:** 06/2014

**Date Completed:** 12/2015

**Original Budget (Cumulative):** \$30,000

**Final Cost (Cumulative):** \$412

**Local Match Contribution:** \$0

**Use of Unspent Funds:** Redistributed to other projects

**Project Reimbursed for LG Staff Time (Y/N):** N – Implementer is not LG

| Best Practices  |
|---|
| <ul style="list-style-type: none"><li>• Meetings with Public Works Directors and Facility Manager</li><li>• Coordination for benchmarking assistance.</li></ul> |

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### Lessons Learned

- The City was unable to coordinate a building for benchmarking.

### Knowledge Transferred

- The City monitors their own buildings and often coordinates directly with the utility companies.
- Public Works takes ownership of monitoring their own buildings for energy use.
- The effort was caught in a transition of Public Works Directors, which hindered the process.

### Benefit to Local Government

- The City of Santa Maria Public Works Department is aware of the Partnership and uses PG&E and Southern California Gas as a resource.

### Benefit to the State

- The City of Santa Maria provides energy efficiency where possible and financially practical.

### Accomplishments

- While communications and coordination continues with the City of Santa Maria through the Partnership, the goal of having a building to benchmark was not accomplished.

### Significant Challenges

- Coordination with the City to find a building for benchmarking.
- The City monitors its facilities using their own methods
- The City often coordinates directly with the utility companies for assistance.

## **11. Strategic Plan Menu # 3.1.2 – Local Government Utility Manager Program**

*Set up a ‘utility manager’ computer program to track municipal usage. Identify need for sub-metering to plan, budget and manage bills.*

### **11.1 Benchmarking in ENERGY STAR Portfolio Manager**

**Local Government Partnership:** Valley Innovative Energy Watch (VIEW)

**Project Purpose:** Benchmark energy use for local governments and help local government staff better understand and manage the jurisdiction’s energy use.

**Project Scope and Components:** Benchmark all VIEW Partners’ utility accounts in ENERGY STAR Portfolio Manager (ESPM). Train local government staff on the use of ESPM’ ESPM to serve as “Utility Manager” program.

**Deliverables:**

- 100% of PG&E utility accounts are entered into Energy Star Portfolio Managers and the Automated Benchmarking Service (ABS).
- PG&E municipal partners with ESPM accounts will be trained on system by VIEW staff.
- Data obtained from ESPM accounts will be used to populate Energy Action Plans.

**Date Initiated:** 03/2013

**Date Completed:** Ongoing

**Original Budget (Cumulative):** \$21,600

**Final Cost (Cumulative):** N/A; project in progress

**Local Match Contribution:** Undetermined. To date match has been in uncategorized local government staff time.

**Use of Unspent Funds:** none.

**Project Reimbursed for LG Staff Time (Y/N):** N – Implementer is not LG

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### Best Practices

- Work with LG staff to “scrub” utility portfolio prior to ESPM upload to remove any incorrect, “dead” or misplaced accounts. This process is a great first step to introduce the LG staff to a holistic portfolio approach.
- Manually uploading accounts, opposed to the ESPM batch upload, results in cleaner data points and fewer errors.
- ESPM is preferred to other paid or subscription services by rural LGs as the ability to pay for a service cannot be guaranteed (based on local leadership priorities).
- ESPM can easily be bastardized to accept all types of utility accounts and is far more valuable than a measurement of building performance. All infrastructure can be benchmarked.
- Register all accounts for automated benchmarking services as part of initiative. If it’s not done at outset of data entry it likely won’t happen.

### Lessons Learned

- ESPM updates can cause glitches and issues across website; accounts must be carefully monitored when this occurs.
- Unknown building characteristics may be included with temporary values and updated for accuracy later.
- May need to consult several municipal staff for account/property information.
- Manually uploading accounts, opposed to the ESPM batch upload, results in cleaner data points and fewer errors.
- The process is long and arduous. It’s not difficult in the sense that it is data entry, but it requires a meticulous touch and someone who cares about the long term outcome. Interns, temporary workers, or basic data entry candidates don’t seem to have the long term vision or care for the work as a mid-level staff member.
- As a result discovered above, the effort costs more per hour than minimum wage or entry level—as long as you don’t want to be constantly having to monitor and review thousands of data points for accuracy each month.
- When a meter is updated its past data does not travel with it. Therefore, if an Animal Control Center gets a new meter two years into monitoring, the person reviewing the energy use data has to know to compare the new meter data to the old meter data and not look at the account as only having existed for two months.
- Local governments often do not have a centralized process for payment on utility accounts, in those that pay department by department there is a lack of understanding about how they compare to other departments. Those that do have centralized payment suffer from disconnected understanding of what is being paid where, i.e. “I don’t know what it powers, I just pay the bills”. Education is key component, but due to lack of staff resources a turnkey program must be delivered.
- There is a very small group of people in the state who really understand ESPM well. Our



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Partnership, Mark Jewel of EEFG and his staff and a handful of IOU assigned staff. Otherwise, this is a very misunderstood tool without clear lines of support.

- Maintenance staff and waste management staff usually know that most about non-major accounts. Don't expect the department heads to know more than the on the ground staff.

### Knowledge Transferred

- Benchmarked account data can be used in Energy Action Plan (EAP) development.
- Benchmarked accounts provide measurable opportunities for energy efficiency investment.

### Benefit to Local Government

- LG staff better understand how energy is used in municipal infrastructure.
- LG staff can make quantifiable investment decisions for EE retrofits on existing infrastructure.
- LG staff can share cost and use data with elected officials to educate on priorities for investment.
- ESPM can provide unofficial measurement of GHG emissions from municipal infrastructure.

### Benefit to the State

- This will help local governments meet the mandatory benchmarking requirement of the State.
- Benchmarking is a well-known strategy for reaching State energy efficiency goals in new and existing buildings.

### Accomplishments

- Cities of Dinuba and Hanford have completed benchmarking.
- Kings County has completed benchmarking.

### Significant Challenges

- ESPM updates created issues within the energy management system.
- Each IOU manages and supports their link to ABS in ESPM. Sometimes this is IOU staff, sometimes it's contracted staff—it takes time to determine resources.
- In one municipality it may be one long time Public Works Director that know the details of each and every utility account, or it may be a collection of directors, maintenance staff

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and waste management personnel that together know the entire portfolio. Each municipality is different and it takes time to sort out who knows what about what.

## 12. Strategic Plan Menu # 3.2.1 – Local Government EAP/CAP

*Develop/adopt an energy chapter for City/ County climate or energy action plan.*

### 12.1 Municipal Capacity Building

**Local Government Partnership:** East Bay Energy Watch

**Implementer:** QuEST

**Project Purpose:** Build greater capacity in local government organizations to prepare for, strategically implement, and benefit from energy efficiency.

**Project Scope and Components:**

Develop a Strategic Energy Planning (SEP) template that enables East Bay LGs to develop a SEP, identify energy-saving projects, and meet related climate action plan goals related to municipal energy management.

**Deliverables:** Strategic Energy Planning templates and planning documents produced by participating local governments

**Date Initiated:** 3/2015

**Date Completed:** 12/2015

**Original Budget (Cumulative):** \$90,000

**Final Cost (Cumulative):** \$89,926.23

**Local Match Contribution:** \$0

**Use of Unspent Funds:** Unspent

**Project Reimbursed for LG Staff Time (Y/N):** N – Implementer is not LG

| Best Practices  |
|---|
| <ul style="list-style-type: none"><li>• Strategic Energy Planning is different from such planning efforts like Climate Action Planning. It must seek commitment from internal partners and champions who will be accountable to other stakeholders for implementing certain initiatives.</li><li>• At present, many local governments have already adopted Climate Action Plans or similar plans that commit the community to specific sustainability goals. Those who have</li></ul> |

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not already done so are most likely small governments with resource constraints. In this project, both participants were small cities. The SEP process requires significant technical assistance and time spent facilitating strategic conversations between groups stakeholders who may not interact regularly or at all as a function of their normal daily duties.

### Lessons Learned

- See Best Practices.

### Knowledge Transferred

- Best practices and lessons learned from this activity were shared with the EBEW SAC.

### Benefit to Local Government

- Aligning internal stakeholders to be accountable to each other, and to commit to an energy efficiency implementation roadmap will facilitate broader adoption of EE for local governments.

### Benefit to the State

- The State has set ambitious energy savings goals for 2020, 2030, and 2050. As individual local governments become their own champions for adopting energy efficiency, these benefits will accrue to the State.

### Accomplishments

- Oakley and Emeryville each completed a SEP document with support from city executives and elected officials. The SEPs follow a format similar to municipal climate action and energy action plans, but provide clear recommendations for implementation of strategies and makes clear accountability of internal stakeholders. The SEP template was made available to EBEW stakeholders for their use.

### Significant Challenges

- None reported.

### 12.2 Energy Action Plans Created and Updated

**Local Government Partnership:** Kern Energy Watch

**Project Purpose:** To provide local governments partners support needed to either implement or update existing EAPs or to create new EAPs.

**Project Scope and Components:** To host an Energy Action Plan Summit and to provide ongoing support to the LGPs in an effort to help them implement or update existing EAPs or to help them create new EAPs.

**Deliverables:**

- Host an Energy Action Plan Summit for local governments
- Number of new local government EAPs/CAPs developed or updated

**Date Initiated:** October 2013

**Date Completed:** November 2014

**Original Budget (Cumulative):** \$14,000

**Final Cost (Cumulative):** \$

**Local Match Contribution:** \$0

**Use of Unspent Funds:**

**Project Reimbursed for LG Staff Time (Y/N):** Y – LGP Implementer staff time.

| Best Practices   |
|--|
| <ul style="list-style-type: none"><li>• Engage local government decision makers</li><li>• Provide local government staff with training and resources for EAP development/improvement</li><li>• Disseminate best practices to area local governments</li><li>• Facilitate knowledge transfer between local governments and subject-matter experts</li></ul> |

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### Lessons Learned

- A number of issues are impacting local governments' ability to adopt and implement Energy/Climate Action Plans:
  - Lack of dedicated funding
  - Staff turnover
  - Limited relevant in-house knowledge, capacity
  - Competing priorities

### Knowledge Transferred

- The summit attracted local government elected officials, department directors/managers, and local government staff, as well as consultants, program implementers and IOU representatives. Best practices were shared during the summit through formal presentations and informal networking among participants.

### Benefit to Local Government

As a result of this activity 12 local government partners were able to begin work on creating new or implementing existing EAPs. These plans serve as road maps for the partners to achieve their energy efficiency goals. The plans provide them with goals and needed strategies to achieve those goals. The plans can be used to have discussions within their municipalities about where they are in their efforts to achieve greater energy efficiency. The plans are also used by the Implementer as a tool to keep the LGPs on target with their stated goals and to identify when those goals and strategies are impacted by other forces that may cause the LGPs to update, remove or adjust a strategy or goal. The plans would not likely have occurred without support from the Energy Watch.

### Benefit to the State

- The goals and strategies identified in the EAPs will help local municipalities to reach the statewide goals of AB 32.

### Accomplishments

- Fifty people attended the KEW Energy Action Plan Summit
- Twelve local governments began work to either create or implement their plans
  - Cities of Arvin, Bakersfield, California City, Delano, Maricopa, McFarland, Ridgecrest, Shafter, Taft, Tehachapi, & Wasco

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- County of Kern

### Significant Challenges

- The Kern Council of Governments withdrew as lead implementer for the Kern Energy Watch at the end of 2014. As a result, the activity's intended goal to both host an EAP training event and provide assistance to LGs on EAP development/update was reduced to the former goal alone until a new LGP implementer could be identified.

### 12.3 Countywide Energy Efficiency Program

**Local Government Partnership:** Madera Energy Watch

**Project Purpose:** Work with various County government departments to develop/adopt an energy chapter for a county climate or energy action plan.

**Project Scope and Components:** Madera County staff served as project managers, introducing greenhouse gas emissions (GHG) inventory processes to various county departments. County staff facilitated data collection from various departments for local government operations. Great Valley Center (GVC) acted as the technical expert, processing data into relevant GHG inventory reports for the purpose of developing a County operations Energy Action Plan. This phase of the project focused on GHG data collection, analysis and reporting.

**Deliverables:**

- GHG inventory report of County government operations
- Organized reports of data collected
- Summary of methodologies used to calculate GHG inventory
- Recommended next steps, pursuant to developing a County Energy Action Plan

**Date Initiated:** August 2013

**Date Completed:** April 2015

**Original Budget (Cumulative):** \$15,000

**Final Cost (Cumulative):** \$1,200

**Local Match Contribution:** None

**Use of Unspent Funds:** None

**Project Reimbursed for LG Staff Time (Y/N):** Y

| Best Practices  |
|---|
| <ul style="list-style-type: none"><li>• Outreach made to relevant county agencies, such as Public Works, Engineering and County Administration.</li><li>• Assessment of GHG emissions using the Local Government Operations Protocol, approved by the California Air Resources Board.</li></ul> |



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- Data analysis conducted by subject-matter experts, under the advisement of ICLEI – Local Governments for Sustainability, the author of the Protocol.
- Reporting of GHG emissions, relevant energy usage and cost, methodologies and recommendations.

### Lessons Learned

- Having County staff serve as the local champion for the effort from within the local government organization was very helpful in obtaining necessary data.
- Supporting staff time in collecting data and facilitating the project ensured timely completion.
- County organizations are typically much larger and more decentralized than city governments, requiring multiple engagements and buy-in from across a variety of departments.

### Knowledge Transferred

- The assessment was conducted by a subject-matter expert, and the report was shared with the County's project management staff.
- The County's project management staff retained the final report and underlying data and methodologies, enhancing the County's ability to make decisions relevant to energy efficiency and GHG emissions reduction.

### Benefit to Local Government

- Identification of GHG emissions and relevant energy usage contributing to GHG emissions.
- Identification of GHG emissions reduction opportunities, including energy efficiency.

### Benefit to the State

- Local governments serve as leaders in communities in reducing GHG emissions, pursuant to the State's AB 32 goals.

### Accomplishments

- The first ever GHG emissions inventory was completed for local government operations in Madera County.
- Madera County Energy Watch staff were educated on the connection between GHG emissions and energy usage.

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### Significant Challenges

- Little or no budget
- Lack of time to fully devote to the program due to small staff within Madera County
- Relatively conservative political climate in Madera County, providing resistance at the leadership level to climate-related efforts.

## **12.4 Greenhouse Gas Inventories: 2012-13 Local Government Operations Inventories; 2013-14 Community Wide Inventories**

**Local Government Partnership:** Mendo-Lake Energy Watch (from 2008-2015 the LGP was known as Mendocino County Energy Watch)

**Project Purpose:** Complete Local Government Operations (LGO) and Community-wide GHG Inventories for all eligible jurisdictions in Mendocino and Lake Counties (a total of 6)

**Project Scope and Components:** Eligible jurisdictions were those jurisdictions in PG&E service territory that had not already completed inventories. These included County of Mendocino, City of Willits, City of Point Arena, County of Lake, City of Lakeport, and City of Clearlake.

**Deliverables:**

- Complete LGO GHG inventories for the six jurisdictions mentioned above; present inventories to jurisdictions' representative Supervisors and City Councilmembers.
- Complete community-wide GHG inventories for the six jurisdictions mentioned above; present inventories to jurisdictions' representative Supervisors and City Councilmembers.
- Assist jurisdictions as needed in development of Energy Action Plans; or assist as needed in identification of funding and design assistance for Climate Action Plans.

**Date Initiated:** Green Communities 2012 LGO Inventories initiated May 1, 2012; 2013-14 Community-Wide Inventories initiated January 1, 2013

**Date Completed:** Green Communities 2012 LGO Inventories completed December 31, 2012; 2013-14 Community-Wide Inventories completed April 2014.

**Original Budget (Cumulative):** All inventories (LGO and CW for all jurisdictions) = **\$211,694** (Green Communities 2012 LGO Inventories = \$84,000; 2013-14 CW Inventories = \$127,694)

**Final Cost (Cumulative):** All inventories (LGO and CW for all jurisdictions) = **\$203,421** (Green Communities 2012 LGO Inventories = \$123,194; 2013-14 CW Inventories = \$80,227)

**Local Match Contribution:** None

**Use of Unspent Funds:** Funds were not drawn down and not re-spent elsewhere.

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**Project Reimbursed for LG Staff Time (Y/N):** Y – for Mendo-Lake Energy Watch LG staff; N – for LG jurisdiction staff.

### Best Practices

- Engage key energy champions in each jurisdiction.
- Complete a detailed implementation plan, with key deliverables and metrics outlined.
- Work closely with ICLEI or other trainer early in implementation to assist in developing an intern training plan.
- Work closely with ICLEI to develop protocol-compliant GHG inventories, including monthly conference calls, ad-hoc technical assistance and periodic training.

### Lessons Learned

- Engagement of at least one key local government representative is key to the successful implementation of GHG inventories.
- Utilization of talented and dedicated interns makes or breaks a successful GHG inventory program, especially in smaller jurisdictions.
- Completion of GHG inventories is not usually a priority in rural areas and there is limited support among the populace for this activity. A well-developed outreach and engagement strategy is thus key for implementation of the inventories.

### Knowledge Transferred

- Best practices and lessons learned shared at past PG&E LGP meetings and older SEEC Forums.
- Lessons learned also shared with rural jurisdictions, most recently through RHTR.

### Benefit to Local Government

- Without this effort, the LGP remains convinced GHG inventories would still not be completed for these six jurisdictions. Completion of the inventories has spurred additional interest in energy savings projects. It has also served as an introduction to the importance of energy efficiency and sustainability to many rural jurisdiction representatives.
- These local governments are able to benefit from the research conducted and conclusions drawn as it pertains to GHG Inventories in their community; this information can be used to inform change and track progress toward GHG emissions reduction in their community.

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### Benefit to the State

- This fully satisfied SP Menu Item 3.2.1.
- Rural areas of the state really struggle to keep up with the advanced technology and specialization in urban governments. Without efforts such as Mendo-Lake Energy Watch's GHG inventory completion, the State would be ill-equipped to encourage satisfaction of SP menu items in rural areas. Because enforcement of compliance often results in a punitive action towards local government, the LGP's efforts with GHG inventories in effect saves both the State and local governments money and time in the long run.
- The work conducted to compile these 6 GHG Inventories is progress in the State's goal to produce and execute Climate Action Plans in communities throughout California. The generation of these inventories can help communities diagnose GHG emissions and identify ways to reduce those emissions.

### Accomplishments

- Completed LGO GHG inventories for the six jurisdictions mentioned above; presented inventories to all but one (Point Arena) of the jurisdictions' representative Supervisors and City Councilmembers.
- Completed community-wide GHG inventories for the six jurisdictions mentioned above; presented inventories to four of the six jurisdictions' representative Supervisors and City Councilmembers.
- Currently assisting County of Mendocino as needed with potential climate action planning activities.

### Significant Challenges

- It was difficult to find a qualified and talented intern pool for implementation of the GHG inventories in the LGP's rural areas.
- Qualified talent is often difficult to find in rural areas. This can put significant pressure on existing staff to learn how to conduct these studies and then implement the studies.

## **12.5 GPLN - Strategic Energy Resource Reports for Loomis and Nevada City**

**Local Government Partnership:** Sierra Nevada

**Project Purpose:** Develop Strategic Energy Resource Reports for Loomis and Nevada City

**Project Scope and Components:** SBC will assist 2 local governments with development of energy action plans or strategic energy resource reports, building upon previously completed greenhouse gas inventories in order to reduce community energy use.

**Deliverables:**

- Number of new local government energy action plans/climate action plans developed

**Date Initiated:** 1/1/2013

**Date Completed:** 8/31/2014

**Original Budget (Cumulative):** \$80,000

**Final Cost (Cumulative):** \$80,000

**Local Match Contribution:** Local government staff time

**Use of Unspent Funds:** Quantify & Describe

**Project Reimbursed for LG Staff Time (Y/N):** N – Implementer is not LG

### **Best Practices**

- Use GHG inventory as basis for developing energy reduction strategies

### **Lessons Learned**

- Public buy-in and input is necessary early in the process

### **Knowledge Transferred**

- The LGP served as a speaker at SEEC forum, sharing lessons learned with other LGP implementers and LGs from throughout the state
- Public presentations to City Councils and Planning Commissions
- Online media via SBC channels

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### Benefit to Local Government

- Developed a comprehensive energy reduction plan with minimal staff hours
- Identified cost savings for jurisdiction and its community

### Benefit to the State

- Reducing community energy use local governments and communities through EAPs help the state achieve its goals related to AB 32

### Accomplishments

- Developed two strategic energy resource reports / energy action plans; approved by respective elected officials.

### Significant Challenges

- Public involvement is time consuming, and can shift goals

## 13. Strategic Plan Menu # 3.2.4 – Local Government Commissioning/Retrocommissioning Policy

*Develop commissioning/retro-commissioning policies for municipal facilities.*

### 13.1 RCx Task Force

**Local Government Partnership:** East Bay Energy Watch

**Implementer:** QuEST

**Project Purpose:** Produce a standard set of tools for RCx and disseminate industry best practices.

**Project Scope and Components:** Develop a set of best practices for RCx in small commercial buildings. This project focused on identifying methods of achieving deeper energy savings in buildings already targeted by Partnership direct install programs.

**Deliverables:**

1. Identifying a suitable pathway to deliver RCx/retrofit measures outside of typical direct install lighting and refrigeration to SMB-class customers.

**Date Initiated:** 6/26/2013

**Date Completed:** 12/31/2015

**Original Budget (Cumulative):** \$10,000 (beginning in 2013)

**Final Cost (Cumulative):** \$16,900

**Local Match Contribution:** \$0

**Use of Unspent Funds:** Unspent

**Project Reimbursed for LG Staff Time (Y/N):** N – Implementer is not LG

| Best Practices  |
|---|
| <ul style="list-style-type: none"><li>• Revisiting DI customers and utilizing RCx is a good strategy for identifying deeper energy savings opportunities.</li></ul> |



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### Lessons Learned

- Small commercial buildings (< 50k square feet) are typically marketed to and served by regional direct install buildings focused on lighting and/or refrigeration energy efficiency measures. Other programs focus on HVAC, but the value and delivery of such a 'bundle' of comprehensive measures is not often communicated to building owners/managers/tenants in a streamlined, easy-to-understand way.
- Past direct install program customers may present additional energy efficiency opportunities normally categorized as RCx (retro-commissioning), where controls, maintenance, and equipment optimization can achieve deeper energy savings.
- Opportunities exist for bringing "big-building EMS strategies" (e.g. temperature set-backs and lock-outs) to small commercial customers through RCx.

### Knowledge Transferred

- Best practices for assessing RCx opportunities in small buildings were developed in collaboration with a Task Force comprised of local government staff representing multiple PG&E partnerships, utility program staff, and program implementers from multiple partnerships.

### Benefit to Local Government

- Local governments in the partnership area benefit from having a formalized tool kit for identifying deep energy savings in small buildings. This may bolster the measure portfolio and cost effectiveness of direct install programs because lighting savings and incentives have been dramatically reduced by Title 24 Energy Code.
- RCx in small buildings achieves energy savings that translate to emissions reductions toward each local government's Climate Action Plan goals, where applicable.

### Benefit to the State

- Deeper energy savings in small buildings brings the commercial building stock incrementally closer to zero net energy.

### Accomplishments

- Produced data collection template in collaboration with Partnership stakeholders.
- Compiled RCx measure summary applicable to small buildings.
- Identified and installed a small building HVAC controls project at a local gym.

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### Significant Challenges

- Small building occupants/owners have limited time and budget to devote to energy efficiency improvements. Identifying the most cost-effective investments is the most effective method of engaging these hard-to-reach customers to achieve deep savings.

## 14. Strategic Plan Menu # 4.1.1 – Community-Wide EAP/CAP

*Develop a regional template for Climate Action Plans (CAP) or Energy Action Plans (EAP).*

### 14.1 Support Implementation and Tracking of CAPs

**Local Government Partnership:** San Mateo County Energy Watch

**Project Purpose:** SMCEW will assist cities in tracking and implementing their CAPs by hosting monthly multi-city working group meetings

**Project Scope and Components:** Support 10 cities to enter GHG emission data into the Regionally Integrated Climate Action Planning Suite (RICAPS) Hara emissions tracking software tool.

**Deliverables:**

- Host 12 RICAPS multi-city working group meetings per year.
- Achieve 10 cities using the Hara tool in 2013-2014

**Date Initiated:** January 2013

**Date Completed:** December 2015

**Original Budget (Cumulative):** \$106,196

**Final Cost (Cumulative):** \$132,970

**Local Match Contribution:** \$0

**Use of Unspent Funds:** n/a

**Project Reimbursed for LG Staff Time (Y/N):** Y – LGP Implementer staff time.

| Best Practices   |
|--|
| <ul style="list-style-type: none"><li>• The RICAPS program has provided ongoing support for cities to develop CAPs, and a monthly working group provides an opportunity for cities to collaborate on implementation and tracking.</li><li>• Tracking emission reduction results is an important process for feedback to implementation strategies.</li><li>• Having a CAP and completing inventories falls short of reviewing the results.</li></ul> |

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### Lessons Learned

- City staff have little time to regularly enter data into a tracking tool, yet entering it annually doesn't allow city staff to remember how a complex software tool works; causing them to have to relearn at every engagement with the tool.
- The Hara software tool, though very comprehensive, proved too complicated for city purposes.
- Hara Software tool was abandoned in September 2014, for another approach whose implementation began with discussions with cities in December 2015.
- Monthly working group meetings help to keep city staff focused on energy and climate action implementation. It also allows the opportunity for cross-county collaboration and countywide initiative development.
- Monthly working group meetings, in-person, were too costly and time consuming, so was reduced to 4 in-person per year and 8 per year by webinar.

### Knowledge Transferred

- Data from six (6) cities was put into templates uploaded into the Hara Software tool before the effort was abandoned.
- Monthly working group meetings were held with an average attendance of 20, and covered a multitude of topics, often suggested by city staff and organized by SMCEW staff. Example topics include: codes and standards, CEQA, climate adaptation, annual monitoring and reporting of CAP progress, Beacon Award program, and others.
- New approach, beyond Hara, created new ideas for how to approach the tracking needs of the cities in San Mateo County.

### Benefit to Local Government

- Working group meetings provide a great venue for best practices sharing.
- Working group meetings provide presentations on timely topics to cities CAP implementation efforts.
- Working group meetings provide opportunity for countywide implementation efforts.

### Benefit to the State

- Any reductions in GHG emissions locally, provide the same for the State.
- Working group meetings provide a venue for Office of Planning and Research topics and updates.
- RICAPS working group can serve as a model for other countywide efforts in the State.

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### Accomplishments

- 12 working group meetings per year were completed, for a total of 36
- A new approach to tracking progress on energy, water, solid waste, and transportation emission reductions was developed for implementation in 2016.

### Significant Challenges

- City staff time to enter data into a central software platform.

## **15. Strategic Plan Menu # 4.1.2 – Customized EAP/CAP**

*Customize CAP with energy efficiency language and data.*

### **15.1 Project Name: Draft Energy Action Strategy (EAS)**

**Local Government Partnership:** AMBAG Energy Watch

**Implementer:** AMBAG

**Project Purpose:** To provide the Energy Action Strategies for all 21 AMBAG jurisdictions to support them in their efforts to reduce energy use both within their facilities and across their communities.

**Project Scope and Components:** The scope of this project was to complete the region's 21 jurisdictions Draft Energy Action Strategies, to have the Draft EAS documents fully QA/QC'd, to meet with senior management at all 21 AMBAG jurisdictions regarding the efficiency strategies developed and modeled in the Draft EAS and where possible, to advance the inclusion of the Draft EAS into the CAPS, which occurred at seven of the 21 jurisdiction.

**Deliverables:**

- 21 Draft Energy Action Strategies

**Date Initiated:** January 2013

**Date Completed:** December 2014

**Original Budget (Cumulative):** \$172,228

**Final Cost (Cumulative):** \$172,142

**Local Match Contribution:** N/A

**Use of Unspent Funds:** \$86.00 - never invoiced for these funds/remained with PG&E

**Project Reimbursed for LG Staff Time:** Y – LGP Implementer staff time. This project was all intensive staff time work. No outside consultants were used, which would have increased the costs related to the work substantially.

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### Best Practices

- Completed the work simultaneously for all 21 jurisdictions over the time period and were able to benefit from regional economies of scale in this work completion.
- Were able to work with all of the 21 jurisdictions to share similarities, and strategies selected by one jurisdiction that could be beneficial for another jurisdiction.

### Lessons Learned

- It is a lesson that is already known, but always remembering it is important in time management. The lesson is that when working with new technology/software, it is highly likely that there will be delays in software release beyond the projected release dates. One just needs to remain flexible.
- Given that efficiency modelling relative to GHG reductions is a relatively new modeling area, it can happen that what a jurisdiction would like to model is simply beyond the scope of accurate modeling within the scope of the existing modeling tools. Recognizing these limitations and working towards improvements in the tools is ongoing

### Knowledge Transferred

- The knowledge gained in the development of these Energy Action Strategies was shared with the 24 member board of elected officials; 6 County Board of Supervisors, and 18 City Council members.
- The knowledge gained in the development of seven of these Energy Action Strategies was shared with technical advisory committees, stakeholder groups, and incorporated in documents presented at public meetings.

### Benefit to Local Government

- The Draft Energy Action Strategy has made it possible for each of the 21 AMBAG jurisdictions to know the range what measures can be utilized to achieve energy efficiency and GHG reductions and the modeled cost associated with each measure.
- This information can provide the direction for the jurisdiction to identify the key measures that they want to pursue to reduce energy use and GHGs.
- This information can provide valuable direction to the public, stakeholders and elected officials as they make their decisions related to energy efficiency measures to adopt.

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### Benefit to the State

- To the extent that the development of the Draft Energy Action strategy then leads to implementing measures that reduce energy use both within the jurisdiction's facilities and within the greater community, this benefits the state by assisting in the achievement of the goals for local governments in the California Long Term Strategic Plan for Energy Efficiency.

### Accomplishments

- LGP has seen major energy efficiency measures undertaken at partner jurisdictions. For example, the City of Salinas, undertook a comprehensive approach to energy efficiency and the installation of renewables. The retrofitted all of their approximately 6,469 exterior streetlights, all building interior and exterior lights, major HVAC efficiency work, and an energy retrofit of their industrial wastewater facility.
- Seven of the LGP's partner jurisdictions have incorporated the Energy Action Strategy measures into their CAPs, including:
  - County of Monterey
  - City of Monterey
  - City of Gonzales
  - City of Watsonville
  - City of Capitola
  - City of Santa Cruz
  - County of Santa Cruz

### Significant Challenges

- The LGP's jurisdictions range in size for population sizes of 307 people to 149,000 people. For the most part they are more rural locations. As such, at many of the jurisdictions, staffing is very sparse. As such, the LGP's regional support is critical to getting this work completed. AMBAG Energy Watch staff is considered and treated as "an extension of staff" for all 21 jurisdictions.
- The jurisdictions, in general, have very limited budgets. As such the LGP is always finding ways to accomplish the goals for less. So, for example, the LSP uses the SEEC tools for all work due to it being available at no cost.



### 15.2 Project Name: Provide Training on New ICLEI Software Module & Community Inventory Protocol

**Local Government Partnership:** AMBAG Energy Watch

**Implementer:** AMBAG

**Project Purpose:** There are two purposes. The first is to have staff at all 21 AMBAG jurisdictions trained to work with the new ICLEI software module. The second, regarding the manual transfer of all data that had resided in the old ICLEI software over to the new ICLEI software was a matter of necessity, as work could not continue in any area of GHG tracking, Energy Action Strategy modeling and CAP development without the data moved over to the new ICLEI software.

**Project Scope and Components:** 1.) Provide a local training where staff from ICLEI comes to the AMBAG region and provides a half day training to staff from all 21 AMBAG jurisdictions so they are aware of the capabilities and mechanics of the new software module. 2.) For all 21 AMBAG jurisdictions, manually transfer data from the 2005 Local Government Operations GHG Inventory Baseline, the 2005, 2009, 2010 Community-wide GHG Inventories, and the Energy Action Strategy data, all of which had been developed prior to the new ICLEI software release (ClearPath California).

**Deliverables:**

- 1 In-person half day training for staff from all 21 AMBAG jurisdictions
- Completed manual data transfer of all data stored in the old ICLEI computer software (CACP) over to their new web-based software (SEEC ClearPath California); 21 Local Government 2005 GHG Baseline Inventories, 21 2005 Community-Wide GHG Baseline Inventories, 21 2009 Community-wide GHG Inventories, 21 2010 Community-wide GHG Inventories, Initial work completed on 21 Energy Action Strategies.

**Date Initiated:** January 2013

**Date Completed:** December 2014

**Original Budget (Cumulative):** \$ 46,000

**Final Cost (Cumulative):** \$ 46,000

**Local Match Contribution:** \$ N/A

**Use of Unspent Funds:** \$0

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**Project Reimbursed for LG Staff Time (Y/N):** Y – LGP Implementer staff time.

### Best Practices

- In terms of the training, the best practice is that the staff from all 21 AMBAG jurisdictions are brought together for the training. This helps to stimulate the professional interest and sharing of jurisdictional best practices among attendees.
- In terms of cost effectiveness, it is much more cost effective to provide the training once for all 21 jurisdictions.

### Lessons Learned

- In terms of new software development, AMBAG did communicate to ICLEI that the need to manually migrate all the data for the LGP's 21 jurisdictions from their original software system to their new software system was quite extensive. The LGP requested that if ever they have a major software change again that they include migration of the data to the new software as a part of their effort and not make it so that the data needed to be manually transferred.
- New software developments will add unexpected consequences to project management.

### Knowledge Transferred

- The training provided to staff from the 21 AMBAG jurisdictions helped LG staff to understand the new software's capability and introduced them to the mechanics of working with it.

### Benefit to Local Government

- The training provided the staff at the 21 AMBAG jurisdictions with the capability of working in the new ICLEI module.
- The manual transfer of all the data for the 21 AMBAG jurisdictions from the old ICLEI software to the new ICLEI software enabled the 21 local jurisdictions to continue to do the work of GHG Inventory tracking, Energy Action Strategy development/implementation and CAP development/implementation

### Benefit to the State

- The state will have staff at 21 AMBAG jurisdictions that are trained and have the internal capacity to operate the tools that assist them in achieving long term energy efficiency and GHG reductions.

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- The state will have access to the data and the planning that has been completed in the AMBAG region in support of the Long Term Strategic Plan. AMBAG Energy Watch rolls up the data to provide a regional perspective on GHG reductions.

### Accomplishments

- The training provides a great opportunity for the LGP's 21 jurisdictions to work and learn together. This way of working together has a positive impact on the outcomes. Staff is more motivated when they are working together across jurisdictions.
- It was essential to conduct the manual migration of all the data. Again, economies of scale kept this as cost effective as possible, because the staff doing this manual data transfer was quite experienced and trained as they completed this operation for 21 jurisdictions.

### Significant Challenges

- It was unforeseen that AMBAG Energy Watch would have to execute this data transfer. It added significantly to the workload, but was ultimately managed effectively and completed.

### 15.3 GHG Final Reporting

**Local Government Partnership:** East Bay Energy Watch

**Implementer:** QuEST

**Project Purpose:** Create 8 customized Energy Action Plans for participating local governments in Contra Costa County.

**Project Scope and Components:** EBEW will develop Energy Action Plans for eight (8) jurisdictions in Contra Costa County. Based on greenhouse gas emissions inventories produced in 2012, a set of energy efficiency strategies was developed that will comprise each jurisdiction's community-wide and municipal energy action plan.

**Deliverables:**

- 8 customized EAPs.

**Date Initiated:** 1/1/2013

**Date Completed:** 7/2013

**Original Budget (Cumulative):** \$96,000

**Final Cost (Cumulative):** \$96,000

**Local Match Contribution:** \$0

**Use of Unspent Funds:**

**Project Reimbursed for LG Staff Time (Y/N):** N – Implementer is not LG

#### Best Practices

- Existing climate action plans offered a wealth of information about efforts in East Bay jurisdictions to improve energy efficiency and increase adoption of renewable energy to benefit from cost savings and reduce GHG emissions. In many cases, the empirical or economic rationale for strategies was not offered or such an analysis was not applied. QuEST extensively researched current energy efficiency program data to supply local governments with complete details of costs and benefits of each strategy; this information is often presented in over-simplified, gross categorizations.

#### Lessons Learned

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- The economics of climate/energy action planning should be clearly articulated in a way that is accessible to community members and staff at all levels of government. Gross characterizations of costs and benefits can be misleading and inaccurate. Per project or per participant costs and savings are more tangible.
- There is considerable market potential for adoption of energy efficiency and renewable energy in jurisdictions with resource-limited governments. These local governments and their communities stand to benefit greatly from utility-funded programming that builds capacity in their organizations to address energy needs and plan for future initiatives.

### Knowledge Transferred

- Best practices and lessons learned from this activity not only informed by direct work with participating local governments, but staff also regularly interacted with implementers in other regions to discuss best practices for data collection, presentation, analysis, etc.

### Benefit to Local Government

- Local governments who are prepared for municipal and community-wide energy efficiency actions can engage community stakeholder groups and work toward cost/energy/emissions reduction goals.

### Benefit to the State

- Energy saved at the municipal or community level will reduce the amount that must be generated, thereby reducing GHG emissions.

### Accomplishments

- Highlighted program impacts are as follows:
  - **2,356,014** Metric Tons Carbon Dioxide equivalent (MT CO<sub>2</sub>e) inventoried, including **20,961** MT CO<sub>2</sub>e from municipal operations
  - **1,808,483,077** kWh of electricity and **77,092,653** therms of natural gas analyzed
  - **8** local governments participated
  - **2** interns hired and trained
  - Population served: **343,253**
- The 8 participating local governments received customized Energy Action Plans at program completion.
- The program effectively raised participants' awareness of and knowledge on issues surrounding climate action planning, energy action planning, energy efficiency, renewable energy, and of best practices from other local governments' experiences with

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creating and implementing CAPs and/or EAPs.

### Significant Challenges

- There was not an industry-standard method for producing an Energy Action Plan. Partners like ICLEI and SEEC make a number of tools available to conduct GHG inventories, but staff commonly had to look to other communities' Climate Action Plans for guidance and context for how to formulate feasible energy action strategies.

### 16.1 Assistance for EAPs/CAPs

**Local Government Partnership:** Great Valley Center (now Valley Vision)

**Project Purpose:** Assist area local governments with climate and energy action planning efforts by incorporating energy efficiency into action plans.

**Project Scope and Components:** Facilitate steering team discussions, researching strategies, integrating stakeholder feedback, preparing and reporting comprehensive plans. Assist up to two jurisdictions (cities and/or counties).

**Deliverables:**

- Request for Applications (RFA) released to qualified local governments in northern San Joaquin Valley
- Program Participation Agreements
- Final Climate/Energy Action Plan document delivered to participating local governments

**Date Initiated:** August 2015

**Date Completed:** December 2015

**Original Budget (Cumulative):** \$ 153,943.35

**Final Cost (Cumulative):** \$153,943.35

**Local Match Contribution:** None

**Use of Unspent Funds:** None

**Project Reimbursed for LG Staff Time (Y/N):** Y (through PGE partnership)

| Best Practices  |
|---|
| <ul style="list-style-type: none"><li>•</li><li>• Develop a regional template for Climate Action Plans (CAP) or Energy Action Plans (EAP) which can be shared among area local governments to encourage consistency.</li><li>• Incorporate energy efficiency best practices and known energy efficiency resources into the CAP.</li><li>• Incorporate policies from the local General Plan to ensure consistent policy.</li><li>• Data analysis conducted by subject-matter experts at GVC, under the advisement of ICLEI – Local Governments for Sustainability, the author of several GHG analysis and CAP protocols.</li></ul> |

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### Lessons Learned

- Merced County was required to develop a Climate Action Plan as a result of adopting a revised General Plan, which exceeded State GHG emissions thresholds for sustainable growth. However, the project management service provided by Great Valley Center was largely focused on energy efficiency, just one part of the overall Climate Action Plan scope. The County was struggling to identify similar resources to complete action planning efforts for other chapters of the CAP, such as transportation and agriculture.
- Access to planning information and background data was crucial to the development of the CAP, which GVC was able to obtain through frequent meetings with Merced County Planning Department.
- SEEC ClearPath California serves as a convenient, no-cost resource to local governments seeking to develop and track the effectiveness of a Climate Action Plan.

### Knowledge Transferred

- The CAP was developed by subject-matter-experts at GVC in consultation with Merced County Planning staff. The final draft of the CAP-Energy Chapter was delivered to Planning staff, along with recommendations for implementing the energy efficiency measures included in the CAP.
- Planning Department staff were provided all backup information, and were given access to SEEC ClearPath California for further assessment and tracking of effectiveness.
- GVC introduced Merced County staff to the Civic Spark program, a partnership between Americorps, the Governor's Office and the Local Government Commission, as one opportunity for completing the CAP and implementing the measures included within.

### Benefit to Local Government

- Identification of GHG emissions and relevant energy usage contributing to GHG emissions.
- Identification of GHG emissions reduction opportunities, including energy efficiency.

### Benefit to the State

- Local governments serve as leaders in communities in reducing GHG emissions, pursuant to the State's AB 32 goals.



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### Accomplishments

- One Climate Action Plan template, including a full energy chapter with recommended measures, was presented to Merced County.

### Significant Challenges

- The scope of funding was limited to developing a template and providing energy efficiency measures as recommendations. The County struggled to fully develop the remaining measures necessary for GHG reductions from other sectors, such as transportation and agriculture, while the project was in development at GVC.

## **16.2 GHG Emissions Inventory/EAP/CAP Assistance Evaluation**

**Local Government Partnership:** Great Valley Center (now Valley Vision)

**Project Purpose:** Conduct evaluation of GHG inventory and Climate Action Plan assistance to-date.

**Project Scope and Components:** Facilitate steering team discussions, researching strategies, integrating stakeholder feedback, preparing and reporting comprehensive plans.

**Deliverables:**

- Effectiveness study of climate inventory and planning for local governments.

**Date Initiated:** August 2015

**Date Completed:** December 2015

**Original Budget (Cumulative):** \$ 48,845.50

**Final Cost (Cumulative):** \$20,000

**Local Match Contribution:** None

**Use of Unspent Funds:** None

**Project Reimbursed for LG Staff Time (Y/N):** Y (through PGE partnership)

### **Best Practices**

- –Conduct needs assessment before committing additional funds to support CAP or EAP assistance. Project was conceived when the LGP exhausted efforts to provide CAP and EAP assistance throughout the area served. To date, the LGP believes it to be the only agency to embark on a study of the effectiveness of GHG inventory projects as a means for local government to define energy efficiency opportunities.

### **Lessons Learned**

- Local governments are reluctant to return phone calls and emails. Our greatest success came from in-person visits.

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- Our original thought that climate work might not necessarily lead to deep energy efficiency work in jurisdictions was proven through the study.

### Knowledge Transferred

- 12-page study document was transferred to PGE, to government partner implementers in the San Joaquin Valley, and to the local governments who participated in the study.

### Benefit to Local Government

- Valley Vision (the successor to Great Valley Center in the 2016 program) expects the study to help start a conversation with local governments about connecting climate work to energy efficiency projects, leverage utility rebate programs, and lead their communities to greater energy efficiency.

### Benefit to the State

- Prior to this study, no one had taken the time to look back on CAP and EAP activities to see whether programs provided at no cost to local government (through the utility partnerships) were of value to these governments. California now knows what some of the barriers local governments face when trying to translate climate planning results into meaningful energy efficiency projects.

### Accomplishments

- Twelve local jurisdictions participated in the study. Each are being visited in person in 2016 to review the results and engage in conversations that the LGP hopes will lead to better understanding of the opportunities available through strong CAP and EAP activity

### Significant Challenges

- Local governments constantly tell us they don't have the time.
- While resources have improved for local governments to consider energy efficiency, budgets remain tight. A strong business case is needed to move the needle.
- Yes

### 16.3 RePower Humboldt

**Local Government Partnership:** Redwood Coast Energy Watch

**Project Purpose:** Refine and implement strategies associated with RePower Humboldt and CAPE.

**Project Scope and Components:** Refine and implement strategies of the "RePower Humboldt" regional energy strategic plan and Redwood Coast Energy Authority "Comprehensive Action Plan for Energy" (CAPE), with an emphasis on community education and outreach, energy efficiency, ZNE buildings, and plug-in electric vehicles.

**Deliverables:** Completed Reports/Plans: RePower Humboldt Pilot Project, PEV Readiness Plan, CAPE Update.

**Date Initiated:** January 2013

**Date Completed:** December 2015

**Original Budget (Cumulative):** \$55,000

**Final Cost (Cumulative):** See Appendix A, Table 1, for 2013 Energy Watch SER costs. Table 2 (Appendix A) models the change in SER categories for 2015. Fiscal/time tracking was not done at a task level but rather at a SER category level. This was also discussed moving into 2015 regarding flexibility and adaptability to changing opportunities in the political sphere. However, RCEA did, to the best of our ability, expend to the SPM budget metric of \$55,000.

**Local Match Contribution:** \$1.75 Million Grant from CEC; \$179,236 for implementation efforts alone. See PIR 12 022; RCEA will also provide additional information on request.

**Use of Unspent Funds:** None, when considering 2013-2015 cycle

**Project Reimbursed for LG Staff Time (Y/N):**Y – LGP implementer staff time .

#### Best Practices

- Leverage CPUC and CEC funds wherever possible to deliver comprehensive planning/implementation efforts.
- The Joint Powers Agency/Authority model works well for crafting plans at the County level.
- Community level campaigns can be effectively managed by LGs.

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### Lessons Learned

- Developing comprehensive plans and implementing them is extremely expensive and labor intensive. RePower, RESCO before, and our CAPE efforts have all shown just how expensive this type of effort is. Our RePower pilot focused on a very small geographic region with an even small population when compared to other areas and it still took a huge investment from the CEC, RCEA and RCEW—all having to be leveraged and balanced to make it work. These costs are ongoing and this lesson is more for the State than our LGs.
- Providing incentives works but will not and is not the sole motivator for action. For comprehensive energy action plans to be effective, the State and the CPUC will have to advance behavioral interventions much quicker than the current progression. Without behavioral interventions we will eventually come to a point where investments into EE and strategy to promote EE will no longer be viable—it's a matter of diminishing returns on EE investments as systems become incrementally more efficient.
- Note that the Mad River Valley RePower program was informed by the Repower document and overarching comprehensive action plan for energy (CAPE) document.

### Knowledge Transferred

- The RePower final report along with CAPE is easily available online. See the following links for more information
  - <http://www.redwoodenergy.org/index.php/renewable-energy/repower-humboldt>
  - <http://www.redwoodenergy.org/index.php/planning/cape>
  - [http://www.schatzlab.org/docs/RePower\\_Humboldt\\_Strategic\\_Plan.pdf](http://www.schatzlab.org/docs/RePower_Humboldt_Strategic_Plan.pdf)
  - <http://ucanr.edu/sites/swet/files/211745.pdf>
  - <http://www.redwoodenergy.org/index.php/renewable-energy/mad-river-valley-community-upgrade>
- Presentations and resources are also made readily available to the public on request.

### Benefit to Local Government

- Afforded RCEA LG staff an opportunity to field test how CPUC/CEC and local dollars can be used to implement comprehensive services in a community.
- Provided critical lessons learned regarding the work volume and needed resources to drive significant impacts forward at the LG and community level.
- Provided a case study for how projects like this could work while incorporating funding through multiple channels. In this case, we worked with LG (City of Blue Lake and RCEA), PG&E, CPUC, CEC and the Blue Lake Rancheria—a federally recognized tribe.

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### Benefit to the State

- A model for a community scale outreach and implementation program informed by the CAP/EAP process. Any community or LG can access our documentation and tools should they request it.
- There were significant Lessons learned regarding funding, implementation and the realities of taking action within a plan to produce verifiable outcomes.

### Accomplishments

- Aligned an implementation effort to a planning document to take action at the LG/community level.
- Met or exceeded goals as aligned to the SPM.
- Used experience to inform potential 2016 CAPE updates.
- Blue Lake Rancheria was recognized as a Climate Action Champion by the White House.
- <http://energy.gov/epsa/climate-action-champions-blue-lake-rancheria-tribe-ca>

### Significant Challenges

- Staffing for implementation in the public, residential and non-residential sectors.
- Incenting action without being able to fully incorporate behavioral modification strategies to the degree we believed to be necessary—including adoption of cost effective efficiency projects.
- Balancing reporting to ensure the PG&E/CPUC understood that this work leveraged multiple funding pipelines but that the value to the ratepayer was greatly increased based on the leveraging of differing funding opportunities. For example, energy planning and energy efficiency services were largely funded by ratepayers whereas looking at PEV and on-site generation largely fell to the CEC/Rancheria funding pipelines.

### 16.4 GHG and Climate Action Planning

**Local Government Partnership:** Redwood Coast Energy Watch

**Project Purpose:** Support local governments with GHG and Climate Action Planning efforts related to energy efficiency.

**Project Scope and Components:** GHG and Climate Action Planning

**Deliverables:** Develop consistent, regional energy and GHG inventory and tracking process. Support local government General Plan updates and CAP development with data and policy/program development.

**Date Initiated:** January 2013

**Date Completed:** December 2015

**Original Budget (Cumulative):** \$62,000

**Final Cost (Cumulative):** See Appendix A, Table 1, for 2013 Energy Watch SER costs. Table 2 (Appendix A) models the change in SER categories for 2015. Fiscal/time tracking was not done at a task level but rather at a SER category level. This was also discussed moving into 2015 regarding flexibility and adaptability to changing opportunities in the political sphere. However, RCEA did, to the best of our ability, expend to the SPM budget metric of \$62,000.

**Local Match Contribution:** Trinidad Rancheria Support, as mentioned in Benchmarking \$1,650 was provided as a match to support Trinidad Rancheria's GHG inventory, Benchmark and to provide technical assistance. Hoopa Valley Rancheria, through a sub-contract with McKeever Energy and Electric, provided \$21,500.00 in match dollars for stakeholder engagement, GHG inventories and the assistance with a CAP.

**Use of Unspent Funds:** None, when considering 2013-2015 cycle

**Project Reimbursed for LG Staff Time (Y/N):** Y – LGP implementer staff time.

#### Best Practices

- Track and record methodology challenges to attempt to be as consistent as possible across GHG updates to ensure they can be compared.
- Leverage CivicSpark to assist with GHG Inventories.
- Have an end that is beyond simply creating an inventory. Ask, what is the inventory driving us towards. Our end is GHG mitigation through Climate Action Plans (CAPs).

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### Lessons Learned

- A consistent methodology is very important for both GHGs and CAPs/EAPs.
- Getting LG buy-in and documenting goals/objectives helps move work past just an inventory and/or CAP and gives an actionable plan.
- Did not complete as many EAPs as we would have liked based on opportunity costs and challenges getting LG buy-in.
- Update, update and update documents.
- Communicate to LG staff/ reps effectively while minimizing opportunity costs.

### Knowledge Transferred

- In-person meetings
- Emails, web presentations and printed reports.
- Engaging CivicSpark Fellows to create sustaining capacity.
- Document, document and document.
- RCEW is working with other communities to share best practices and methodologies. For example, we met with Medno/Lake a few years ago to cross-pollinate.

### Benefit to Local Government

- Assists LGs with GHG emissions reporting and CAP implementation (Blue Lake).
- Provided GHG benchmark and ongoing updates to monitor emissions/verify activities as having or not having a significant impact.
- Provides funding for an activity that is critical but may not be a high priority for any LG during any given Fiscal Year. This has been particularly acute for small rural communities who had seen staff cuts and pay cuts associated with the great recession.

### Benefit to the State

- Generates measurable and verifiable inventories tied to action plans.
- Will lead towards measureable energy savings over time as plans are initiated and projects move forward.
- Show LGs that the State is invested in supporting their activities.

### Accomplishments

- 2005 inventories completed
- 2010 community updates completed for 8 RCEA member agencies
- CAP completed for Blue Lake and Hoopa Valley Housing Authority
- Successes staged RCEA to continue CAP/EAP and GHG efforts moving into 2016 and beyond.



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### Significant Challenges

- Local capacity to do work—staff turn-over and the rural brain drain phenomenon creates unique long term challenges. Note this is where CivicSpark has fit into the puzzle.
- Only being able to fund energy action plans is really a bottleneck. LGs want the whole shebang and selling a partial project is hard. We strongly recommend that the CPUC allow partners to fund CAPs, in full, through ratepayer funds.

### 16.5 Publication of updated Climate Action Plan

**Local Government Partnership:** San Francisco Energy Watch

**Project Purpose:** Climate Action Strategy (CAS) released

**Project Scope and Components:** Publication of updated Climate Action Plan

**Deliverables:**

1. New CAP posted on Website (<http://sfenvironment.org/cas>)

**Date Initiated:** Sept 2013

**Date Completed:** March 2014

**Original Budget (Cumulative):** \$8,000

**Final Cost (Cumulative):** Not specified

**Local Match Contribution:** Unquantified, but considerable.

**Use of Unspent Funds:** Not specified

**Project Reimbursed for LG Staff Time (Y/N):** Y – LGP Implementer staff time.

#### Best Practices

- Measure, report, and update community GHG and energy goals.
- Maintain and strengthen relationships with community to support commitment to environmental goals.

#### Lessons Learned

- Storytelling and simplification are essential to effective outreach.
  - The updated Climate Action Strategy was summarized as “0-50-100-Roots” to help connect stakeholders, agencies, and residents toward the common citywide goals of Zero Waste by 2020, 50% of all trips via sustainable transport by 2015, 100% renewable energy citywide by 2030, and “Roots” = pulling carbon out of the atmosphere and back into plants and soil.

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### Knowledge Transferred

- San Francisco Department of Environment staff present on the Climate Action Strategy to cities and stakeholders on a daily basis to audiences ranging from residents and colleagues in the City, to regional corporations and other cities, to the state, national, and international levels.
- At the Vatican Climate Summit in July 2015, Mayor Lee brought international attention to San Francisco's updated Climate Action Strategy, and the City's third-party verified achievement of a 22% reduction below 1990 levels of GHG emissions.

### Benefit to Local Government

- Maintains common goals and framework for action.
- Identifies areas of success, and where additional analysis & improvement are needed.
- Attracts clean tech economic development

### Benefit to the State

- Demonstrates climate action and economic development are complementary interests – not in competition.
- Supports numerous related state goals, mandates, and programs, including but not limited to the CEESP, ZNE goals, AB32, and the AB758 Action Plan.

### Accomplishments

- CAS completed and published.
- The primary purpose of the CAS is to communicate the status of San Francisco's climate goals and next steps. The process of developing the update helped SF Environment identify additional analytic work necessary to realize the long term goals.

### Significant Challenges

- None Reported.

### 16.6 Support Development of CAPs using RICAPS

**Local Government Partnership:** San Mateo County Energy Watch

**Project Purpose:** SMCEW will assist four cities in drafting their climate action plans (CAPs) and one city in drafting their energy action plan using the RICAPS template.

**Project Scope and Components:** Work with cities ready to draft CAPs and EAPs through evaluation of current GHG emissions or energy use, establish a business as usual trend, set target reduction and necessary reductions to meet the target using the RICAPS tools. Working with the city, edit the draft CAP document as necessary to complete a draft document for adoption by the city.

**Deliverables:**

- Complete four draft CAPs and one draft EAP.
- Provide technical support to these five cities and all other cities working towards their draft CAPs
- Provide technical support to achieve adoption of the draft CAPs and EAP.

**Date Initiated:** January 2013

**Date Completed:** December 2015

**Original Budget (Cumulative):** \$113,424

**Final Cost (Cumulative):** \$93,826

**Local Match Contribution:** \$65,257

**Use of Unspent Funds:** \$19,598 remaining funds were rededicated to other SER efforts.

**Project Reimbursed for LG Staff Time (Y/N):** N

#### Best Practices

- Cities in San Mateo County are mostly small and it is recognized that they have neither the staff nor the funds to hire an outside consultant to help them realize a CAP or EAP.
- Providing a technical consultant and the tools (RICAPS) to simplify the process will help achieve a countywide goal of every city having a CAP or EAP as soon as possible.

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### Lessons Learned

- City staff will not focus on development of a CAP or EAP unless it has been identified by upper management as a priority, or until they have the perception of available staff time on their own.
- Developing a draft CAP is a first step in the process to adoption. It can take a year or more to move from a draft to adoption.
- The draft can change significantly while going through adoption by the city council.
- Every city considers energy efficiency (as well as the energy mix) a key element of meeting their CAP goals.

### Knowledge Transferred

- The CAP or EAP drafting and adoption process is an education rich experience for staff, management, council and citizens, because they have to select feasible measures to reach their climate or energy goals.
- Technical support provided to cities educates multiple departments at cities through the CAP or EAP process.
- Updates on CAP and EAP progress is made at RICAPS working group meetings.

### Benefit to Local Government

- Without this support, only the larger cities in San Mateo County would have CAPS or EAPs.
- Technical consultant provides knowledge from across the State; other cities approaches to reducing resource use and emissions.
- The shared resource and RICAPS tools process greatly reduces the cost (staff time) for cities to develop CAPs or EAPs.

### Benefit to the State

- Any reductions in GHG emissions locally, provide the same for the State.
- The State tracks the number of CAPs completed in CA and posts this data on the OPR or ARB website.
- RICAPS working group can serve as a model for other countywide efforts in the State.

### Accomplishments

- Completed ten (10) draft CAPs and supported adoption of six (6) CAPs.

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### Significant Challenges

- The process takes time, mainly due to city staff time limitations and the public process to draft a CAP and move the CAP or EAP from draft to adoption.
- Implementation is just as challenging.

### 16.7 Energy Action Plans

**Local Government Partnership:** Valley Innovative Energy Watch (VIEW)

**Project Purpose:** Create customized Energy Action Plans (EAPs) for City of Dinuba. (Kings County was later added using unspent funds from 1.1.1)

**Project Scope and Components:** Create customized EAPs to fit the needs of individual cities and counties while maintaining a regional focus.

**Deliverables:**

- Number of EAPs customized

**Date Initiated:** 03/2013

**Date Completed:** Ongoing

**Original Budget (Cumulative):** \$21,600 (unspent funds from 1.1.1 reallocated to this effort)

**Final Cost (Cumulative):** N/A; project in progress

**Local Match Contribution:** Undetermined. To date match has been in uncategorized local government staff time.

**Use of Unspent Funds:** none.

**Project Reimbursed for LG Staff Time (Y/N):** N – Implementer is not LG

#### Best Practices

- Use local government's General Plan as resource in initial research.
- Work with local government staff to determine history of energy efficiency (EE) programs as well as current and potential projects; equally important to work with PG&E Community Energy Manager to determine if the LG has participated in utility programs.
- Benchmark all utility accounts to provide a holistic portfolio approach to determining retrofit opportunities.

#### Lessons Learned

- May need to work with several LG staff to obtain all necessary information.
- Each jurisdiction is different (different capacity, vision, etc.), and so the EAP must be structured for the city or county and its particular needs while maintaining a regional feel.

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### Knowledge Transferred

- Local government staff share lessons learned, future EE projects and EE tips with the community.
- Local government staff better understand the benefit of benchmarking energy use.

### Benefit to Local Government

- EAPs provide local governments with a snapshot of EE in their city or county in the past and a roadmap for future EE developments, policies and programs.
- EAPs allow local governments to demonstrate their commitment to building an energy efficient culture.

### Benefit to the State

- EAPs set a precedent and allow LGs to lead by example with their own facilities and energy saving practices. EAPs require inclusion of benchmarked energy data, supporting the state's goals toward benchmarking provisions.

### Accomplishments

- Preliminary research has been completed for the City of Dinuba.
- EAP for the County of Kings is 90% complete.
- A Climate Action Plan (CAP) for the City of Hanford is complete; EAP development will begin shortly.

### Significant Challenges

- EAPs condense a large quantity of information; it is challenging to figure out the best possible way to do this.
- Political will. Since EAPs are usually spoken in the same breath as CAP they can be a hard sell in conservative rural governments. The LGP has learned to observe the separation of energy efficiency and cost savings from “sustainability” and “conservation” in certain parts of the region.
- The Kings County Association of Governments (KCAG) began work on a regional CAP in 2012; in 2014 due to political infighting, only one municipality (Hanford) was willing to accept the document. The other four rejected the KCAH CAP on face value and the partnership has had to play catch up to address EE policy as a result.



### 16.8 City of Woodland Climate Action Plan

**Local Government Partnership:** Yolo Energy Watch

**Project Purpose:** Assist in Development of Climate Action Plan

**Project Scope and Components:** Provide funding and support for development of energy efficiency portion of CAP

**Deliverables:**

- Adoption of Climate Action Plan that includes an energy element

**Date Initiated:** 1/1/12

**Date Completed:** 12/31/14

**Original Budget (Cumulative):** \$105,000

**Final Cost :** \$105,000

**Local Match Contribution:**

**Use of Unspent Funds:** N/A

**Project Reimbursed for LG Staff Time (Y/N):** Y – LGP Implementer is LG.

#### Best Practices

- Relationships build trust
- Exposure creates opportunity
- Involving technical experts from UC Davis got Woodland over the hurdle of preparing technical support for the CAP

#### Lessons Learned

- Municipal staff in smaller jurisdictions may have the interest in developing a CAP, but often don't have the time or technical ability to actually construct a CAP.
- Partnerships with UC Davis can leverage technical ability to enable cities to produce a CAP

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### Knowledge Transferred

- City staff participated in development of the CAP and acquired fluency with technical analysis sufficient for ongoing support of the CAP's

### Benefit to Local Government

- The city developed, and is now implementing, a CAP

### Benefit to the State

- Support the state's efforts to reduce GHG emissions per AB 32 goals

### Accomplishments

- The city is implementing a CAP, and YEW is able to assist in implementing energy related measures as part of the LGP's work with the municipal government.

### Significant Challenges

- Finding the funding (PG&E's support for this non-YEW expense was critical).

## **17. Strategic Plan Menu # 4.1.3 – Community-Wide Planning for Energy Efficiency**

*Update General Plan/Conservation Element with Climate policies. Provide energy efficiency framework and data for other people doing planning.*

### **17.1 Countywide Energy Efficiency Program**

**Local Government Partnership:** Madera Energy Watch

**Project Purpose:** Work with County government departments to integrate EE in all operations

**Project Scope and Components:** All County government departments will be given the opportunity to better understand energy efficiency programs so that EE can be integrated into everything they do.

**Deliverables:**

- EE projects in every county department
- EE awareness in every county agency

**Date Initiated:** June 2013

**Date Completed:** December 2015

**Original Budget (Cumulative):** \$3,000

**Final Cost (Cumulative):** \$ 3,000

**Local Match Contribution:** None

**Use of Unspent Funds:** None

**Project Reimbursed for LG Staff Time (Y/N):** Y

| <b>Best Practices</b>   |
|---|
| <ul style="list-style-type: none"><li>• Outreach made to every county agency.</li><li>• Outreach in the form of an annual report was made to the Madera County Board of Supervisors</li><li>• Projects completed include: Oakhurst Sewage Treatment Plant, Countywide lighting retrofits, County Transit Station lighting retrofits, and solar panels on the County Office Building Parking Structure</li></ul> |

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### Lessons Learned

- Having the implementer from within the local government was very helpful in engaging various departments and points of contact responsible for making decisions regarding energy efficiency, resource conservation and sustainability practices in general.
- Water/energy Nexus training offered by the Central Valley Energy Tune Up program (City of Fresno) was helpful in identifying energy efficiency opportunities related to a high priority item (water conservation during historic drought).
- Elected officials are more supportive when they are presented examples of projects taking place, case studies or success stories because the value of energy efficiency projects are not always immediately understood by local officials.

### Knowledge Transferred

- County Board of supervisors can look at the significant amount of resources invested in County facilities and know that they were good stewards of public dollars
- Each elected official on the Board of Supervisors were informed and engaged in program reports

### Benefit to Local Government

- Energy efficiency retrofits save tax dollars in local government
- Community can see that their local government is a leader in energy efficiency, and not just following the lead from a larger jurisdiction.

### Benefit to the State

- Focusing on public sector strengthens the tie between local jurisdictions and the state.

### Accomplishments

- Four major countywide projects in three years including a major solar installation
- Madera Energy Watch is seen as a catalyst in getting things done around energy efficiency in county facilities.

### Significant Challenges

- Little or no budget
- Lack of time to fully devote to the program due to small staff within Madera County

### 17.2 Energy Management Circuit Rider

**Local Government Partnership:** Napa County Energy Watch

**Project Purpose:** Test the need for and cost-effectiveness of an “on call” energy manager to assist very small utility customers in maintaining the gains achieved through energy efficiency retrofits

**Project Scope and Components:** Create a pilot program to test the concept of an energy management “circuit rider” as a way to guarantee that energy efficiency measures stay effective and behavior in use of those measures improves over time

**Deliverables:**

- Create a pilot program to test the concept of an energy management “circuit rider” as a way to guarantee that energy efficiency measures stay effective and behavior in use of those measures improves over time
- Create a baseline assessment of energy use for pilot participants
- Conduct monthly reviews of energy use, identify trends compared to energy use expected post- energy efficiency retrofits, identify possible causes for upward trends in energy use
- Ongoing dialogue with management of pilot participants to identify causes for increases in energy use and recommend strategies for improvement
- Evaluation of capacity of pilot participants to either maintain their own energy management strategies or use advice provided by a “circuit rider.”
- Evaluation of cost effectiveness of this approach for achieving continued or improved savings post- EE retrofits
- Test the assumption that energy efficient equipment is only as good as its use and maintenance.

**Date Initiated:** January 2015

**Date Completed:** September 2015

**Original Budget (Cumulative):** \$33,825 (2013-2014: \$15,000; 2015: \$18,825)

**Final Cost (Cumulative):** \$17,737 (\$1475 in 2014 and \$16,262 in 2015)

**Local Match Contribution:** None

**Use of Unspent Funds:** Returned to PG&E

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**Project Reimbursed for LG Staff Time:** Y – LGP Implementer staff time.

### Best Practices

- Leverage LGP resources to assist underserved, small customers to take advantage of energy efficiency resources.
- Pilot new strategies before scaling
- 

### Lessons Learned

- To assure continuity, follow up on actual effectiveness of implemented energy efficiency measures need to be managed by PG&E/LGP. The ROI of this effort will be hard to quantify, but is important to avoid energy excursions that offset EEM gains. In addition, given that NCEW's anecdotal experience has been that when clients follow up on recommendations on maintenance and operations, energy reduction as much as 15-20% was observed, some more systematic approach to EEM post-implementation follow up could improve overall efficiency.
- Depart from the "One Size Fits All" approach to energy use evaluations. Have the initial audit go deeper than EEM recommendations, and provide applicable SOP's, control mapping and set up, and maintenance review/contractor interface. Include water usage in the audits. To be effective, the approach needs to be tailored to individual customer environments.
- Begin work on educational strategies for customer management teams on energy conservation-encouraging personnel policies and management protocols.
- Perform a business check up via PG&E My Energy at each site to validate its usage.
- Select sites with an energy budget of greater than \$12,000/year for a "Circuit Rider" approach.
- Energy conservation has to be a priority for top management, and it has to be included in employee incentive programs.
- Energy conservation will be a challenge unless energy is a fairly high percentage of the customer's operating budget or there is some other non-monetary driver for top management engagement.
- Incentives, rebates and information on how to develop and use good O&M standard procedures have to be simple, easy to understand, and tailored to the individual customer.
- An energy management "circuit rider," together with a more robust MyEnergy program (with some real time alerts available) and access to technical experts to help with O&M strategies, could help customers maintain or improve their efficiency, but making it cost effective will be a challenge.
- Most facilities do not have any trained or skilled facilities managers.
- Facility users and operators are disconnected from the administrative staff that pays

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the utility bill. Thus they have no knowledge of the facility energy end usage and costs.

- For small facilities energy usage is so small it is not a factor in their overall budget.
- From outside appearance non-profits have a great deal of occupant health & safety issues on their plates, many do not have the time, resources and/or personnel to devote to monitoring energy usage.
- Energy costs are buried into larger operating budgets and don't receive much attention or review.
- Buildings with solar electric installations that are net positive in cash flow have no inclination to care about or devote resources to saving energy, and are often unaware of ongoing system output (until a true up shock arrives).
- Natural gas (heating) costs are so small in comparison to electricity costs that energy efficiency reduction measures for heating systems will not have much financial payback.
- There is a high turnover of management staff at the non-profits. Continuity and communication of efficiency and maintenance programs is minimal. Many facilities are staffed operated by low pay and or part time employees that also have a high turnover; setting up training procedures for these type of building environments is difficult.

### Knowledge Transferred

- Meetings with PG&E staff and fellow LGPs

### Benefit to Local Government

- Insight into what it takes to help small utility customers maintain energy savings; potentially transferrable to larger commercial customers; same principles apply

### Benefit to the State

- Same as above

### Accomplishments

- Tested the concept of a "circuit riding" energy management expert; however, it was determined through the pilot that achieving this process in a cost-effective manner would depend on upgrades of PG&E systems, such as MyEnergy, to include real-time tracking, monitoring and alerts.
- Assisted pilot group in understanding energy use and the importance of keeping on top of it

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- Developed the outline of a reasonably cost effective system for small utility customers to get energy manager assistance

### Significant Challenges

- Customers are not first and foremost interested in energy savings
- Customers lack the expertise to monitor energy use and identify and correct problems; this challenge increases as the size of the customer decreases
- Solar energy installation dulls customer appetites for efficiency measures and creates a false sense of security and diminished attention to maintenance
- Fragmentation of decision making makes attention to maintenance difficult (facility management and bill payment are in separate places)
- Current set of tools are not easy to use (need to upgrade MyEnergy)



### 17.3 Guadalupe Upgrades

**Local Government Partnership:** Santa Barbara County Energy Watch Partnership

**Project Purpose:** To promote energy efficiency building upgrades, Direct Install, and to assist the City of Guadalupe in distributing energy efficiency information to all residents and businesses. The project contributed to raising community awareness for energy efficiency and sustainability. Guadalupe is a small, largely Hispanic city with a population of about 7,000, located about 9 miles west of Santa Maria.

**Project Scope and Components:**

- Upgrading of lighting and other energy efficiency upgrades to municipal buildings through a mini-grant provided by the Santa Barbara County Energy Watch Partnership: City Hall and associated department offices, and to the American Legion Veterans Center. Work performed by Staples Energy. Funds provided by a mini-grant from the Santa Barbara County Energy Watch Partnership.
- Endorsement from the Mayor of Guadalupe urging residents and businesses to promote energy efficiency and participate in the Partnership and other programs.
- Assisted the City of Guadalupe in an outreach program to businesses and residents.
- A direct mail packet was sent in English and Spanish to every household and business in Guadalupe. It included a letter from the Mayor of Guadalupe, a Santa Barbara County Energy Watch Partnership brochure, utility information from PG&E and So Cal Gas, and information other programs such as American Eco, EmpowerSBC, and the Santa Barbara County Green Business Program.

**Deliverables:**

- Report energy efficiency upgrades as a result of this effort.
- Report community outreach metrics, such as material distributed, number of engagements.

**Date Initiated:** 01/2013

**Date Completed:** 12/2013

**Original Budget (Cumulative):** \$15,000

**Final Cost (Cumulative):** \$13,484

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**Local Match Contribution:** None

**Use of Unspent Funds:** N/A

**Project Reimbursed for LG Staff Time:** Y – LGP provided grants to partner LGs

### Best Practices

- Upgrading municipal facilities in a city which is financially challenged
- Assisting the City of Guadalupe in reaching out to its businesses and residents to participate in energy efficiency programs.
- Providing mailers and materials in both English and Spanish to every business and household in the City of Guadalupe.
- Coordinating with other agencies (Santa Barbara County Foodbank) in distributing energy efficiency materials and program information to people through its mobile food distribution program and enhancing outreach to hard-to-reach segments of the population.
- Printing and marketing materials were produced locally which benefitted local businesses.

### Lessons Learned

- Financially challenged municipalities need direct assistance to promote energy efficiency. They usually do not have the staff time or funds to upgrade and provide information and distribute materials without assistance.
- Elected officials are aware of the need for energy efficiency, but small cities like Guadalupe have other items on their priority list when it comes to staff time.
- Cities are very receptive when assistance is provided, financially and in outreach.
- Energy efficiency awareness is a process and does not happen overnight to small cities, the businesses and residences.

### Knowledge Transferred

- Our efforts provided outreach for the EmPowerSBC program which followed up with the Guadalupe Community.
- American Eco followed up and provided energy upgrades for lower income residents that qualified.
- Foodbank of Santa Barbara County provides a mobile food program that reaches people who are hard to reach, including Spanish speaking, low income and elderly. The LGP coordinated with the Foodbank to distribute energy efficiency information.
- All businesses in Guadalupe received a special invitation to the LGP's annual Green

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Business Energy Efficiency Forum.

- Energy Watch Partnership Manager helped to integrate knowledge and lessons learned to other Partnerships.

### Benefit to Local Government

- City of Guadalupe gained lighting upgrades to City Hall and associated departments at no direct cost to the city through a mini-grant provided by the Santa Barbara County Energy Watch Partnership.
  - The City of Guadalupe saves over 35,000 kwh annually.
  - Local Veteran group (American Legion) was upgraded.
  - City households and businesses received direct program information for energy efficiency at no direct cost to the City of Guadalupe.

### Benefit to the State

- The program provided upgrades to the City of Guadalupe, which is a small, predominately Hispanic, community.
- Program provided energy efficiency awareness and programs to hard-to-reach segments of the population.

### Accomplishments

- - Municipal Facilities and Veteran Building lighting upgrades generated savings of roughly 35,000 kwh annually.
  - Mailers and materials mailed to 170 businesses and 1,293 households.
  - Public Support from the Mayor and other City officials
  - A number of residents signed up for energy assistance programs through the utility companies.

### Significant Challenges

- The Partnership lead the way in all aspects of the upgrades and outreach due to staffing and financial constraints with the City.
- Because Guadalupe is an outlying community, it takes additional resources, time and effort to reach the businesses and residents.

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### 17.4 Earth Day Event

**Local Government Partnership:** Santa Barbara County Energy Watch Partnership

**Project Purpose:** Outreach for energy efficiency and sustainability to all businesses, including AG and hard-to-reach businesses. The event had business focus that included energy efficiency, hazardous waste disposal, and e-waste disposal.

**Project Scope and Components:** Santa Barbara County Energy Watch Partnership sponsored the event, along with other agencies. The Partnership promoted it to businesses, had a table and provided information for attendees. Partnership marketing for the event included direct mail, e-mail, Chamber resources, updates at meetings, and word of mouth.

**Deliverables:**

- Number of attendees at Earth Day event engaged by program

**Date Initiated:** 01/2014

**Date Completed:** 05/2014

**Original Budget (Cumulative):** \$4,000

**Final Cost (Cumulative):** \$4,000

**Local Match Contribution:** \$0

**Use of Unspent Funds:** n/a

**Project Reimbursed for LG Staff Time (Y/N):** N – Implementer is not LG

#### Best Practices

- While Earth Day was a community-wide event, it was held during a business day and promoted to attract businesses. Besides energy efficiency outreach, the event featured free hazardous waste disposal and e-waste disposal for businesses.
- The Santa Barbara County Energy Watch Partnership was a major sponsor.
- The Partnership marketed the event through direct mail, e-mail, and funded a major advertising effort that included radio and newspaper.

#### Lessons Learned

- Weather and wind played a major factor and would be taken into account for future

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events.

- Event was not well attended.
- Coordination with other agencies enhanced the value of the event.

### Knowledge Transferred

- The Santa Barbara County Energy Watch Partnership worked with other groups for this event, such as EmPowerSBC, the City of Santa Maria Landfill and Recycling Department, and County Works Department.

### Benefit to Local Government

- City of Santa Maria gained by additional outreach for its programs and for participation in energy efficiency.
- County of Santa Barbara used the event to raise sustainability awareness.

### Benefit to the State

- [Event raised awareness for sustainability among businesses and the general public.

### Accomplishments

- Partnership distributed over a 200 brochures and energy efficiency packets.

### Significant Challenges

- Weather affected attendance at the event

### 17.5 Solar PV for Low-income Residents

**Local Government Partnership:** Yolo Energy Watch

**Project Purpose:** Support identification of eligible homes, and installation of solar pv for low-income residents

**Project Scope and Components:** Provide GRID Alternatives with information and support to permit low-income residents to realize significant savings on their energy bills due to increased energy efficiency and installation of solar pv systems at no or little cost . .

**Deliverables:**

- Partnership to provide information on the state's "loading order" and EE program information to households eligible for the GRID program
- Provide a Young Energy Leader to assist with the program

**Date Initiated:** 1/1/14

**Date Completed:** 12/31/15

**Original Budget (Cumulative):** No direct funds. YEW provided an intern for the Young Energy Leaders program.

**Final Cost (Cumulative):** No direct funds

**Local Match Contribution:** None

**Use of Unspent Funds:** N/A

**Project Reimbursed for LG Staff Time (Y/N):** N – No PG&E funds directly utilized.

#### Best Practices

- Seek to build trust with customers. Low-income residents are often those least likely to be able to afford energy efficiency and solar PV and this program was a perfect partnership with GRID Alternatives to penetrate that market

#### Lessons Learned

- This program, because it involved no direct costs, was a perfect partnership to promote energy efficiency in low-income residences.
- Building relationships and trust is important
- Low-income homeowners have a hard time spending money in order to save money

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### Knowledge Transferred

- YEW participated in public events and media notices
- YEW staffed informational tables at community events
- YEW met with community leaders
- YEW provided an intern to assist with the program through the Young Energy Leaders program

### Benefit to Local Government

- The partnership provided energy efficiency information and installed solar pv on residences in each of the communities in Yolo County

### Benefit to the State

- YEW activities supported a state program to provide energy information and solar pv to low-income homeowners
- Program recipients had lower energy usage along with a greater understanding of the importance of reducing greenhouse gas emissions

### Accomplishments

- The program resulted in dissemination of energy efficiency information and installation of solar pv systems in residences in each community in Yolo County.
- The program created an awareness of the importance of energy efficiency in a traditionally difficult to reach population.

### Significant Challenges

- PG&E guidance to not use funds to support solar energy

### 17.6 City of Davis; Chamber of Commerce

**Local Government Partnership:** Yolo Energy Watch

**Project Purpose:** Develop relationships with SMB in City of Davis to promote energy efficiency]

**Project Scope and Components:** Develop plan to promote energy efficiency through the auspices of the Chamber of Commerce.

**Deliverables:**

- Participation in civic events
- Presentations at Chamber meetings
- Development of a plan of action to promote energy efficiency

**Date Initiated:** 1/1/12

**Date Completed:** 12/31/14

**Original Budget (Cumulative):** \$15,000

**Final Cost (Cumulative):** \$15,000

**Local Match Contribution:** In-kind

**Use of Unspent Funds:** N/A

**Project Reimbursed for LG Staff Time (Y/N):** Y – LGP Implementer staff time.

| Best Practices  |
|---|
| <ul style="list-style-type: none"><li>• Seek to build trust with customers</li><li>• Leverage local partners to promote energy efficiency</li></ul> |



| Lessons Learned  |
|--|
| <ul style="list-style-type: none"><li>• The measures PG&amp;E had to offer were not compelling to local businesses; Davis has a long history of energy efficiency and most measures available through the Energy Fitness program had long since been installed in most businesses</li><li>• Businesses renting rather than owning their building had little interest in increasing energy efficiency</li></ul> |



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- Building relationships and trust is important
- Business people have a hard time spending money in order to save money

### Knowledge Transferred

- YEW made presentations at Chamber events
- YEW staffed informational tables at community events
- YEW met with community leaders

### Benefit to Local Government

- YEW activities reinforced an understanding of the importance of energy efficiency

### Benefit to the State

- YEW activities reinforced an understanding of the importance of energy efficiency
- Business and community people had a greater understanding of the importance of reducing greenhouse gas emissions

### Accomplishments

- YEW activities created an awareness of the importance of energy efficiency as well as relationships to promote that to SMB's in specific and the community in general

### Significant Challenges

- Split incentive
- Small businesses are reluctant to spend money, even to save money
- Davis has a long history of energy efficiency and to a large extent the market for Energy Fitness measures was already saturated
- Overcoming mistrust of government and PG&E

### 17.7 Green the Greeks

#### Local Government Partnership: Yolo Energy Watch

**Project Purpose:** Develop a pilot program to audit and install energy efficiency measures in a fraternity in order to showcase the potential for energy savings to other fraternities and sororities.

**Project Scope and Components:** Start with one fraternity; try to develop plan for the entire Greek Community from that pilot.

#### Deliverables:

- Audit a fraternity
- Make Presentations to other fraternities
- Expand to other Greek houses

**Date Initiated:** 1/1/14

**Date Completed:** 12/31/15

**Original Budget (Cumulative):** \$1,000

**Final Cost (Cumulative):** \$1,000

**Local Match Contribution:** In-kind

**Use of Unspent Funds:** N/A

**Project Reimbursed for LG Staff Time (Y/N):** Y – LGP Implementer staff time.

#### Best Practices

- Targeted customer engagement is piloted and evaluated before being scaled
- Seek to build trust with customers

#### Lessons Learned

- Overall the pilot was not successful due to a number of unanticipated challenges.
- Campus-based organizations are not easily classified as either a business customer or residential customer, and have a number of unique challenges not present within typical

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customer segments.

### Knowledge Transferred

- YEW made presentations at individual fraternities and fraternal organizations
- YEW provided information about energy efficiency to fraternities
- YEW met with leaders in the Greek community
- PG&E made presentations to the Greek community
- YEW arranged for an audit of a fraternity, and paid for that audit

### Benefit to Local Government

- Goal of reduced energy consumption was minimally realized

### Benefit to the State

- Had this been successful, it could have been a model for the state

### Accomplishments

- Minor energy efficiency improvements to a fraternity
- YEW materials informed resident of energy efficiency

### Significant Challenges

- Students have demands on their time that make follow through difficult
- Fraternity buildings can be in significant disrepair and in need of structural improvement before energy efficiency becomes a priority
- PG&E reassignment of key staff member

### 17.8 City of Winters Chamber of Commerce

**Local Government Partnership:** Yolo Energy Watch

**Project Purpose:** Develop relationships with SMB in City of Winters to promote energy efficiency

**Project Scope and Components:** Identify energy efficiency opportunities for SMB

**Deliverables:**

- Participation in civic events
- Presentations at Chamber meetings

**Date Initiated:** 1/1/12

**Date Completed:** 12/31/15

**Original Budget (Cumulative):** \$5,000

**Final Cost (Cumulative):** \$5,000

**Local Match Contribution:** In-kind (eblasts, etc)

**Use of Unspent Funds:** N/A

**Project Reimbursed for LG Staff Time (Y/N):** Y – LGP Implementer staff time.

#### Best Practices

- Seek to build trust with customers
- Leverage local partners to promote energy efficiency

#### Lessons Learned

- The measures PG&E could offer through the Energy Fitness program were not compelling to local businesses.
- Businesses renting rather than owning their building had little interest in spending funds for energy efficiency
- Building relationships and trust is important
- Business people have a hard time spending money to save money

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### Knowledge Transferred

- YEW participated in Chamber events
- YEW staffed informational tables at community events
- YEW met with community leaders

### Benefit to Local Government

- The partnership provided energy efficiency information to businesses and community leaders to help create a positive atmosphere for development of and adoption of a Climate Action Plan

### Benefit to the State

- Program recipients had lower energy usage along with a greater understanding of the importance of reducing greenhouse gas emissions
- The partnership provided energy efficiency information to businesses and community leaders to help create a positive atmosphere for development of and adoption of a Climate Action Plan

### Accomplishments

- The program resulted in dissemination of energy efficiency information to virtually the entire Winters business community
- The program created an awareness of the importance of energy efficiency in the Winters community.

### Significant Challenges

- Split incentive
- Small businesses are reluctant to spend money to save money
- Overcoming, in some cases, mistrust of PG&E and Government (YEW)
- PG&E guidance to not use YEW funds for Chamber membership

### 17.9 Woodland Tree Foundation

#### Local Government Partnership: Yolo Energy Watch

**Project Purpose:** Partner with WTF to plant trees in a program to (1) educate homeowners about the energy saving value of trees properly planted to provide shade and (2) to reduce energy use through shading of buildings.

**Project Scope and Components:** Partner with community organization and community leaders to support planting hundreds of trees to shade buildings in the Woodland community and provide energy efficiency information.

#### Deliverables:

- Participation in civic events
- Presentations at Chamber meetings

**Date Initiated:** 1/1/14

**Date Completed:** 12/31/15

**Original Budget (Cumulative):** \$5,000

**Final Cost (Cumulative):** \$5,000

**Local Match Contribution:** In-kind

**Use of Unspent Funds:** N/A

**Project Reimbursed for LG Staff Time (Y/N):** Y - LGP Implementer staff time.

#### Best Practices

- Seek to build trust with customers
- Partnering with local programs can leverage funds to achieve greater energy efficiency

#### Lessons Learned

- Partnership with WTF with an emphasis of the energy efficiency potential of tree canopies provided leveraging of funds, as well as an opportunity to reach students in local schools
- Partnering with WTF also enhanced relationships with local elected officials

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- Building relationships and trust is important
- Everybody loves trees

### Knowledge Transferred

- YEW made presentations at school events
- YEW provided information about how trees can reduce building energy use
- YEW met with community leaders and participated in tree plantings that received local media coverage, thereby expanding the message to the community at large

### Benefit to Local Government

- Reduced energy consumption
- Increased co-benefits (comfort, aesthetics, etc) due to tree planting
- Tree planting as a strategy to increase energy efficiency became an integral part of the city Climate Action Plan

### Benefit to the State

- YEW activities contributed to an atmosphere wherein a Climate Action Plan that included a strategy of tree planting could be favorably received

### Accomplishments

- YEW activities contributed to planting approximately 100 shade trees
- YEW materials informed resident of the energy efficiency value of tree planting
- Participation permitted partnership with the City of Woodland, its mayor, and other officials

### Significant Challenges

- PG&E provided guidance in late 2015 which made it difficult to justify the tree planting effort. Without an alternative funding source, the program was discontinued.

## **17.10 Northern California Construction and Training Center --- Solar and Electricity Modules for classroom demonstration and to supplement energy curriculum**

**Local Government Partnership:** Yolo Energy Watch

**Project Purpose:** As a component of the School Energy Efficiency Program partnership with the City of West Sacramento, the Washington Unified School District, and the Yolo County Office of Education, provide materials for construction of demonstration modules for use by teachers and students at River City High School, as well as for training purposes for students through the Northern California Construction and Training Center.

**Project Scope and Components:** Provide mobile energy and solar pv demonstration units to teachers in the Washington Unified School District and students and community members undergoing training through NCTC.

**Deliverables:**

- Provide materials to NCTC to construct two mobile demonstration units for classroom use, as well as one on site training facility.

**Date Initiated:** 1/1/14

**Date Completed:** 12/31/14

**Original Budget (Cumulative):** No funds from YEW budget

**Final Cost (Cumulative):** No funds from YEW budget

**Local Match Contribution:** None

**Use of Unspent Funds:** N/A

**Project Reimbursed for LG Staff Time (Y/N):** No funds from LGP budget were expended.

| <b>Best Practices</b>   |
|---|
| <ul style="list-style-type: none"><li>• Seek to build trust with customers</li><li>• Leverage local partnerships to promote energy efficiency: Partnership with NCTC, West Sacramento, and YCOE focused resources to directly benefit Washington Unified students</li></ul> |



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### Lessons Learned

- This program worked because it brought together all the key partners for a successful program.

### Knowledge Transferred

- The demonstration units were used in multiple classrooms increasing the knowledge base of both teachers and students.

### Benefit to Local Government

- The partnership provided significant educational resources to the Washington Unified School District for classroom curriculum and projects.

### Benefit to the State

- YEW activities supported a program to provide educational materials to local schools that could not otherwise afford them.

### Accomplishments

- The program accomplished its goal of providing educational materials to local schools for use in classroom projects related to both energy efficiency and solar PV. .

### Significant Challenges

- The partnership was a huge success with necessary demonstration material delivered to classrooms. Future efforts of the partnership are not possible due to PG&E guidance to not use funds to support solar energy, though the LGP will be able to support continued efforts in energy efficiency.

### 17.11 City of West Sacramento Chamber of Commerce

**Local Government Partnership:** Yolo Energy Watch

**Project Purpose:** Develop relationships with the West Sacramento Chamber of Commerce to identify and promote energy efficiency in small and medium size businesses.

**Project Scope and Components:** Participate in Chamber activities in order to identify energy efficiency opportunities for SMB

**Deliverables:**

- Participation in civic events
- Presentations at Chamber meetings
- “Walk-and-Talk” outreach – one on one conversations with businesses regarding energy efficiency and PG&E programs/direct install.

**Date Initiated:** 1/1/12

**Date Completed:** 12/31/15

**Original Budget (Cumulative):** \$7,500

**Final Cost (Cumulative):** \$7,500

**Local Match Contribution:** In-kind (eblasts, etc)

**Use of Unspent Funds:** N/A

**Project Reimbursed for LG Staff Time (Y/N):** Y – LGP Implementer staff time.

#### Best Practices

- Seek to build trust with customers
- Leverage local partners to promote energy efficiency

#### Lessons Learned

- The measures PG&E could offer through the Energy Fitness program were not compelling to local businesses.
- Businesses renting rather than owning their building had little interest in spending funds for energy efficiency

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- There are few communication tools available through the Chamber of Commerce that proved effective
- Business people have a hard time spending money to save money

### Knowledge Transferred

- YEW participated in Chamber events
- YEW staffed informational tables at community events
- YEW met with community leaders

### Benefit to Local Government

- The partnership provided energy efficiency information to businesses and community leaders to help create a positive atmosphere for energy efficiency

### Benefit to the State

- Program recipients had lower energy usage along with a greater understanding of the importance of reducing greenhouse gas emissions
- The partnership provided energy efficiency information to businesses and community leaders to help create a positive atmosphere for energy efficiency

### Accomplishments

- The program was not successful in terms of identifying small and medium sized businesses receptive to energy efficiency improvements.
- The program was successful in dissemination of energy efficiency information to the West Sacramento business community

### Significant Challenges

- Split incentive: very few local small and medium size business own the building in which their business is located.
- Small businesses are reluctant to spend money to save money
- Overcoming, in some cases, mistrust of PG&E and Government (YEW)
- In terms of ongoing efforts, PG&E guidance to not use YEW funds for Chamber membership

## **18. Strategic Plan Menu # 4.1.4 – Community Wide EE Savings Analysis**

*Conduct the energy efficiency savings analysis for an annual Greenhouse Gas inventory for the City/ County.*

### **18.1 CESC - SmartSolar Program**

**Local Government Partnership:** East Bay Energy Watch

**Implementer:** CESC

**Project Purpose:**

70 residential and 25 commercial PV assessments; 70 solar thermal assessments; 40 home audit reimbursements

**Project Scope and Components:**

The SmartSolar Program provides property owners interested in solar installations with energy efficiency site assessments in order to promote the loading order and efficient deployment of solar. In addition to client services, SmartSolar engages local government agencies and energy efficiency and solar companies in sharing marketing, best practices, and tracking. As a free and independent service, the program works to transform the solar market to one that serves the customers' best interests and is most cost-effective.

**Deliverables:**

- Number of residential and commercial PV assessments
- Number of solar thermal assessments;
- Number of clients reimbursed for Home Energy Performance Assessments

**Date Initiated:** May 1, 2010

**Date Completed:** December 31, 2015

**Original Budget (Cumulative):** \$307,000

**Final Cost (Cumulative):** \$307,000

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### Local Match Contribution: \$73,047.12

Local match contribution provided through the City of Berkeley from a grant from the U.S. Department of Energy's Solar America Cities Initiative . CESC developed SmartSolar through a partnership with the City of Berkeley and the Solar America Cities initiative.

### Use of Unspent Funds: 0

**Project Reimbursed for LG Staff Time (Y/N):** N – Implementer is not LG.

#### Best Practices

- SmartSolar is an innovative free service designed to transform the solar market into one that has the confidence of prospective consumers and serves their best interests by providing them:
- General information resources and project advising on solar technologies, energy efficiency improvements, tax incentives, utility rebates and financing options;
- Assessments of residential and commercial properties and ongoing project advising services regarding cost-effective energy efficiency, solar hot water, and solar electric technologies;
- Referrals to energy efficiency and building performance rebate programs, solar organizations, local government programs, and contractors while providing financial advice services and analyses during the bidding process;
- A collaborative process with local government agencies, community organizations, and energy efficiency and solar companies to promote best practices, develop targeted marketing strategies, and help document progress towards climate action plan objectives.
- **Energy Efficiency:** Throughout SmartSolar's existence, energy efficiency has always been strongly emphasized during conversations with customers and highlighted thoroughly in presented solar assessments. During the enrollment process, clients are instructed to depict which energy efficiency measures have or have not been targeted for their home or business and the resulting solar assessment factors in potential costs, rebates, and energy reduction before sizing the solar system. SmartSolar encouraged residents to conduct home performance audits, at times providing a \$200 reimbursement, and suggested businesses conduct comprehensive building, lighting and refrigeration audits through the EBEW Direct Install SmartLights program.

#### Lessons Learned

- The SmartSolar program made several program delivery changes to meet the changing needs of the clients, and local governments, including:

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- SmartSolar worked closely with Home Performance Contractors since September 2010 to offer residential customers a \$200 home performance audit reimbursement program staff found the cost of a home energy assessment was a barrier for clients to get a home energy report. This service was initiated at the request of the City of Berkeley to supplement the Money for Energy Efficiency (ME2) Program.
- The ME2 Program was a precursor to the Energy Upgrade California (EUC) Program, which has since replaced any City programs like ME2 with one streamlined process for whole house upgrades. Beginning in September, 2011, SmartSolar extended its \$200 audit reimbursement offer to all Alameda and Contra Costa County residents enrolled in SmartSolar who did not have a local city rebate or county rebate available.
- In some cases, home performance contractors referred their customers to SmartSolar for solar advising and for the \$200 rebate, while in other cases SmartSolar directed solar clients, interested in building performance measures, to EUC approved contractors. The overall collaboration demonstrates the potential and practical movement for the energy efficiency industry and solar industry becoming more mutually inclusive.
- SmartSolar referred low electric users to a local nonprofit SunWorks Renewable, who specifically works with customers with low electric bills Many East Bay customers have already undertaken energy efficiency measures, or have homes which do not have AC systems and so have low electric bills. For these customers solar PV is not cost effective, and are not eligible for some solar leases.
- SmartSolar partnered with an online Solar assessment company called EnergySage to provide instant assessments, and enter interested clients into an online marketplace where solar installers can bid on their projects. Through new technology, solar PV assessments can be done remotely. Through the EnergySage partnership SmartSolar was able to provide assessments to many more customers cost effectively.

### Knowledge Transferred

- SmartSolar staff presented reports several times to the East bay Energy Watch Strategic Advisory Council
- SmartSolar staff prepared a Replicable Model Report and shared it with the SF Energy Watch and the Redwood Coast Energy Watch, along with phone consultations.

### Benefit to Local Government

- SmartSolar worked closely with local cities to ensure that their respective residents and businesses were aware of the Program by providing a descriptive summary and

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link to the SmartSolar website within the city environmental, energy, and/or building permitting webpage(s). Along with website recognition, SmartSolar was also mentioned in City-wide newsletters and at community energy forums for the following cities: Berkeley, Albany, Fremont, Oakland, El Cerrito, Pleasanton, Emeryville, Richmond and Pleasanton.

- SmartSolar played a pivotal role in the City of Berkeley's quest to install city owned solar PV by providing solar assessments for 23 municipal buildings. The rooftop assessment and financial analysis allowed the city to lay the ground work for comparing bids, targeting higher potential projects, and setting up a budget for installation. Although no systems have been installed to date, plans are in place to install solar on many of Berkeley's city buildings.
- CESC staff presented on the SmartSolar Program at the Behavior Energy And Climate Conference in 2014 and 2015 on its unique program model, and outreach strategy combining energy efficiency and solar

### Benefit to the State

- SmartSolar helped encourage the adoption of Solar PV for both residential and commercial customers.

### Accomplishments

- Number residential and commercial PV assessments: 468
- Number of solar thermal assessments: 365
- Number of clients reimbursed for Home Energy Performance Assessments: 52
- Number of Systems installed: 40
- KW generated : 465

### Significant Challenges

- SmartSolar generally had much larger customer participation and installation levels from residential property owners than commercial, municipal or non-profit property owners. There are a number of reasons why commercial participation was lower than residential, in spite of marketing efforts. Residential customers interested in solar energy tend to have a much greater need for an independent advisor to walk them

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through their energy options, and with regards to building energy improvements due to an ambiguity on who should pay for upgrades, the property owners or tenants.

- As a free educational service with no direct installs to be tracked and monitored internally, the SmartSolar Program relied heavily on client self-reported information to track actual energy saving measures and solar systems installed.



## **18.2 Small Commercial Energy Management Systems (EMS for SMB)**

**Local Government Partnership:** East Bay Energy Watch

**Implementer:** QuEST

**Project Purpose:** All local governments have access to current energy data and summaries of energy performance to be made available to decision makers.

**Project Scope and Components:**

The EMS for SMB Program seeks to install wireless energy management systems in small to mid-sized commercial buildings. The program will bring large building energy management systems (EMS) to smaller class B and C buildings and similar municipal buildings. By centralizing building controls, wireless energy management systems enable comprehensive energy savings opportunities including HVAC, lighting and plug load control, as well as monitoring, performance reporting, and maintenance diagnostic capabilities.

**Deliverables:**

- Number of wireless EMS installed

**Date Initiated:** 6/26/2013

**Date Completed:** 12/31/2014

**Original Budget (Cumulative):** \$175,000

**Final Cost (Cumulative):** \$174,024.36

**Local Match Contribution:** \$0

**Use of Unspent Funds:** Unspent

**Project Reimbursed for LG Staff Time (Y/N):** N – Implementer is not LG

| <b>Best Practices</b>  |
|--|
| <ul style="list-style-type: none"><li>• Wireless HVAC controls have rapidly become more cost-effective and sophisticated, providing a feasible path to installing EMS in small buildings and implementing 'big building' energy management strategies.</li></ul> |

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### Lessons Learned

- Assessing a customer's attitude toward energy efficiency is important during recruitment and screening. Firm commitments to enforcing control strategies are necessary to ensure persistent energy savings.

### Knowledge Transferred

- Best practices and lessons learned from this activity were shared with the East Bay Energy Watch Strategic Advisory Committee, and with external partners participating on the RCx Task Force.

### Benefit to Local Government

- HVAC performance is very much an untapped source of energy savings for commercial and municipal buildings. Control equipment was installed in both kinds of buildings and provides enhanced, remote control where there was none before.

### Benefit to the State

- Deeper energy savings achieved in hard-to-reach customer classes like small commercial and municipal buildings bring the building stock closer to zero net energy.

### Accomplishments

- Staff completed an intensive product analysis, developed system specifications, and developed marketing materials.
- Created custom schedules for each controlled space based on occupant overrides; uploaded schedules and made manual adjustments to schedules via web portal.
- Created customer portal to view web-enabled thermostat activity.
- Installed total of 5 EMS in East Bay buildings.

### Significant Challenges

- Perhaps the most significant challenge was recruiting customers into the pilot, which paid the majority share of the project cost. This applied to both commercial and municipal customers, despite the LGP's strong relationships with local governments.

### 18.3 Benchmarking and Strategic Planning for Schools

**Local Government Partnership:** East Bay Energy Watch

**Implementer:** QuEST

**Project Purpose:** Prepare local schools to apply for and leverage Prop 39 funding.

**Project Scope and Components:**

The Benchmarking for Schools program will provide energy benchmarking and planning assistance to a select number of East Bay public school campuses so they are prepared to leverage grants and other financial assistance aimed at energy improvements. Participating schools will receive ENERGY STAR benchmarking for all facilities on campus, enrollment in Pacific Gas and Electric's My Energy online account management tools, training in the use and application of both tools and a report of benchmarking results, as well as a prioritized list of buildings to target with energy audits.

**Deliverables:**

- Number school buildings benchmarked;
- Number of final reports of benchmarking results;
- Case studies describing outcomes.

**Date Initiated:** 6/26/2013

**Date Completed:** 1/2014

**Original Budget (Cumulative):** \$60,000

**Final Cost (Cumulative):** \$26,833.60

**Local Match Contribution:** \$0

**Use of Unspent Funds:** \$33,166.40 total remaining; all re-allocated to other Strategic Plan activities including the following:

- Conduct a baseline survey of municipal permitting processes and develop a set of guidelines and best practices for contractors, implementers, and the Committee.
- Extend funding for Contra Costa County Climate Leaders program until end of 2014.
- Extend 2013-14 cycle funding for QuEST's leadership and contributions to RCx Task Force.

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- Extend funding of participation stipends into 2014, at \$400 per meeting.

**Project Reimbursed for LG Staff Time (Y/N):** N – Implementer is not LG

### Best Practices

- Schools are energy intensive and high-priority utility customers. PG&E was able to offer a wealth of benchmarking data to help QuEST target candidate school districts

### Lessons Learned

- Small school districts find information about energy performance very valuable. By closely following Prop 39 instructions and working with PG&E account managers, staff produced a narrative report of benchmarking results, potential energy efficiency projects, and recommended action steps the school subsequently used to apply for their Prop 39 reserved funding.
- Feedback from multiple school districts indicated that they wanted to receive comprehensive benchmarking analysis, rather than benchmarking analysis for a sample of facilities. Due to funding and time constraints, the program was re-directed toward a single school district to provide more comprehensive analysis for the single participant.

### Knowledge Transferred

- Best practices and lessons learned from this activity were shared with the East Bay Energy Watch Strategic Advisory Committee.

### Benefit to Local Government

- Utility customers who are informed and aware of their energy use are better positioned to make decisions about energy efficiency, including securing necessary funding and executing cost-effective projects. Schools in this category of informed customers will achieve energy savings and associated emissions reductions that count toward a community's CAP goals.

### Benefit to the State

- Benchmarking and energy planning facilitate decision making about energy efficiency improvements that will bring the building stock closer to zero net energy and the State closer to its GHG emissions reduction goals.

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### Accomplishments

- A one-school district in Contra Costa County participated in the program. The school received a site visit, and energy use was benchmarked for buildings on the school's campus. Staff delivered preliminary and final reports of findings and recommendations to administrators. Recommendations included project ideas (furnace retrofit) and information about funding through Prop 39.

### Significant Challenges

- The most significant challenge was recruiting customers into the project. There was not sufficient funding to serve entire large school districts, who manage many buildings, so they opted not to participate. Additionally, another implementer external to the East Bay Energy Watch rolled out a much more expansive and well-funded assistance planning program for Bay Area schools around the same time this project was beginning.

### 18.4 Continuous Process Customer Service

**Local Government Partnership:** East Bay Energy Watch

**Implementer:** QuEST

**Project Purpose:** Maintain continuous engagement with Energy Watch customers to promote EE adoption.

**Project Scope and Components:**

The Continuous Process pilot program will address service gaps to promote participation among Small Medium Businesses (SMB) that received an energy audit during the 2010-2012 program cycle. The program has two main objectives: 1) provide a “one-stop shop” for SMBs within the partnership and 2) understand the degree to which offering SMBs a dedicated energy specialist impacts participation. As part of the “one-stop shop,” this program will provide SMBs (including municipal facilities) with comprehensive customer service.

**Deliverables:**

- Attempt to sell 100 projects and re-engage former customers who had previously declined.
- Produce case studies

**Date Initiated:** 6/26/2013

**Date Completed:** 5/2014

**Original Budget (Cumulative):** \$95,000

**Final Cost (Cumulative):** \$89,488.04

**Local Match Contribution:** \$0

**Use of Unspent Funds:** \$5,178.36 reallocated to Mini RCx Market Analysis; remainder unspent

**Project Reimbursed for LG Staff Time (Y/N):** N – Implementer is not LG

| Best Practices  |
|---|
| <ul style="list-style-type: none"><li>• SMB utility customers are a classic ‘hard-to-reach’ market segment, with limited funding, and attention to devote to activities like energy efficiency. Through continuous engagement and technical assistance, the strength of the Partnership’s brand and mission might be improved such that customers place higher priority on participation.</li></ul> |

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### Lessons Learned

- 400 Businesses who had received proposals for the most cost-effective lighting and refrigeration projects (SPP < 1 year) were targeted in this project. Staff contacted all 400 customers, and conducted site visits for the 100 projects representing highest savings and most cost effective within that subset. Only 14 customers desired to revisit proposals; 3 customers ultimately installed projects. In spite of offering additional project management assistance, enrollment in PG&E's MyEnergy tool, and Energy Star benchmarking at no cost, customers were simply not ready to make investments.

### Knowledge Transferred

- Best practices and lessons learned from this activity were shared with the EBEW SAC and SMB DI program implementers.

### Benefit to Local Government

- Communities benefit from all energy savings installed by DI programs and all associated GHG emissions reductions.

### Benefit to the State

- Same as above.

### Accomplishments

- Staff contacted 400 customers spread across the East Bay who were presented with cost-effective project proposals during the previous program cycle.
- Staff conducted 100 site visits to customers with projects presenting the greatest savings potential and greatest cost-effectiveness. 14 referrals were made to program contractors.
- 3 referrals resulted in installed projects. The additional project management assistance provided to customers by staff was not sufficient to drive significant adoption of ECMs in their businesses. Project work was completed in May 2014 as requested by the EBEW Strategic Advisory Committee and project results were discussed with that group. Remaining funds were allocated to other existing and new projects.

### Significant Challenges

- Decision makers were difficult to reach, which is characteristic of small businesses.
- Incentive rates (in 2013-14) had decreased for many types of measures identified in

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2010-12, resulting in what was usually a small cost impact. The vast majority of projects still had Adjusted Simple Payback Periods between 6-9 months.



## **18.5 GHG inventory**

**Local Government Partnership:** San Francisco Energy Watch

**Project Purpose:** See Scope and Components

**Project Scope and Components:** GHG inventory

**Deliverables:**

1. Third party verification

**Date Initiated:** Sept 2013

**Date Completed:** December 2014

**Original Budget (Cumulative):** \$52,300

**Final Cost (Cumulative):** \$54,034.64

**Local Match Contribution:** None

**Use of Unspent Funds:** N/A

**Project Reimbursed for LG Staff Time (Y/N):** Y – LGP implementer staff time.

| <b>Accomplishments</b>  |
|---|
| <ul style="list-style-type: none"><li>• Municipal and Community GHG inventories completed verification. See website for verification reports: <a href="http://www.sfenvironment.org">www.sfenvironment.org</a>.</li></ul> |

### 18.6 CAP Implementation, monitoring and reporting

**Local Government Partnership:** San Luis Obispo Energy Watch Partnership

**Project Purpose:** Work with 6 cities and Cal Poly

**Project Scope and Components:** Work with Cal Poly and 6 municipalities to develop a regional approach for data collection and a localized approach for implementation, monitoring, & reporting.

**Deliverables:**

- Implementation, monitoring, & reporting guide

**Date Initiated:** Jan/2014

**Date Completed:** Dec/2014

**Original Budget (Cumulative):** \$25,000

**Final Cost (Cumulative):** Individual project expenditures were not tracked until 2015

**Local Match Contribution:** \$N/A

**Use of Unspent Funds:** N/A

**Project Reimbursed for LG Staff Time (Y/N):** Y – LGP Implementer staff time.

#### Best Practices

- Serve local jurisdictions via collaboration with an academic institution nationally recognized for climate action planning curriculum and education.
- Develop and implement a regional and systematic approach to data collection and analysis - leveraging resources, experience, training, shared challenges and needs, etc.
- Develop and implement a regional and localized approach to implementing measures common to all climate action plans; and monitoring and reporting to them similarly.

#### Lessons Learned

- Engaging local government agencies in SLO County – as in other rural and hard to reach regions is very challenging. None of the LGP's partners – including all of the

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incorporated cities have dedicated energy or climate staff. Moreover energy and climate are not priorities. As a result, it is difficult to establish buy in for this work, to persuade staff to dedicate time to it, and to fully leverage the data and analysis gained from it.

- Collaborating with partners outside the partnership, especially a nationally recognized academic institution is difficult and requires direct oversight and coordination of all details. Professors and students tend to be busy and unorganized.

### Knowledge Transferred

- The main way knowledge was transferred was by taking lessons learned from this collaborative effort and applying it to future work (with similar scope) done in collaboration with CivicSpark, their host APCD, and the same jurisdictions.
- The second way that knowledge was transferred was to other programs – specifically the Municipal Energy Management Program - that were likely to face similar challenges or have similar needs.

### Benefit to Local Government

- For the majority of the local government agencies served by SLO Energy Watch under this initiative, this was the first time anything substantive was done toward tracking and/or implementing their climate action plans.

### Benefit to the State

- First and foremost, it's about engaging and educating customers – in this case local government agencies re: the energy use and cost, and related GHG emissions of their buildings.
- Second, for cities, this represents their contribution to the statewide GHG reduction targets set by AB 32.

### Accomplishments

- All incorporated jurisdictions were engaged re: their interest in participating in a regionally, collaborated data collection and measure implementation effort.
- All climate action plans were thoroughly reviewed and cross-referenced.
- Several meetings were held re: tracking methodology and implementing common climate action plan measures.
- Data tracking workbooks were developed and shared.

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### Significant Challenges

- Engaging local government agencies in SLO County – as in other rural and hard to reach regions is very challenging. None of the LGP’s partners – including all of the incorporated cities have dedicated energy or climate staff. Moreover energy and climate are not priorities. As a result, it is difficult to establish buy in for this work, to persuade staff to dedicate time to it, and to fully leverage the data and analysis gained from it.
- Not all customers were interested in participating.
- Some customers were interested in participating, but did not provide data or collaborate during the process.
- Politics – many of the elected officials and staff within these jurisdictions don’t believe climate change is occurring.
- Resources – most of these jurisdictions don’t have the staff or budget to support these efforts; and they see them as peripheral to their core functions.

### 18.7 Community-Wide GHG Inventories

**Local Government Partnership:** San Mateo County Energy Watch

**Project Purpose:** SMCEW will coach cities through the process of collecting their municipal inventory data and complete community-scale inventories on their behalf.

**Project Scope and Components:** Provide technical consultant to collect resource use data in order to generate community-wide GHG emission inventories for the years 2010 to 2013. Assist cities in collecting data for government operations emission inventories for 2010. Reach a total of 14 cities who complete both emission inventories.

**Deliverables:**

- Master data sheets and with emission inventory results for 14 cities.
- Provide technical support to all cities in order to reach goal.
- Provide templates to cities to use for data collection with technical support.

**Date Initiated:** January 2013

**Date Completed:** December 2015

**Original Budget (Cumulative):** \$152,501

**Final Cost (Cumulative):** \$146,587

**Local Match Contribution:** \$0

**Use of Unspent Funds:** \$5,914 remaining funds were rededicated to other SER efforts.

**Project Reimbursed for LG Staff Time (Y/N):** Y – LGP Implementer staff time.

| Best Practices  |
|---|
| <ul style="list-style-type: none"><li>• Data for community-scale emission inventories basically comes from the same sources for all cities, so once data is obtained for one city it is relatively less effort to obtain similar data for other cities.</li><li>• Once a technical consultant has the data set for the first year of an emissions inventory, it is relatively less effort to get the following year from the same source.</li><li>• Calculations are based on a protocol and are therefore the same, so the same spreadsheet can be used for multiple cities.</li><li>• All cities' data can be rolled up into one countywide emissions inventory to create a</li></ul> |

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collaborative tool.

### Lessons Learned

- The cost for completing 21 community-scale emission inventories through a single consultant is more cost-effective than each city doing so individually.
- Water data is difficult to parse out by city because water agency boundaries do not align with city boundaries.
- There are currently two approaches to counting vehicle miles traveled data, and some cities prefer the older approach, which is less accurate, because it is the approach used on their original inventory (2005).

### Knowledge Transferred

- Emissions are often reported to city councils as part of an annual update.
- Cities receive a master data sheet and summary of their emissions from the technical consultant.
- Data will eventually be published to an open data portal for all to see.

### Benefit to Local Government

- Without this support, most cities would not complete emission inventories.
- The shared resource process greatly reduces the cost (staff time) for cities to receive emission inventories.

### Benefit to the State

- RICAPS working group can serve as a model for other countywide efforts in the State.

### Accomplishments

- 48 community-scale emission inventories were completed.
- 6 government operations inventoried were completed.

### Significant Challenges

- Even if templates are provided to cities, government operation inventories require significant staff time to complete the data collection process required.

### 18.8 DIY Library Tool Kit

**Local Government Partnership:** Silicon Valley Energy Watch

**Project Purpose:** Promote energy efficiency among community members by offering a tool kit through local libraries.

**Project Scope and Components:** The Kit contains a manual, tools, energy-efficiency items for the borrower to keep (to be restocked by program staff upon return), and a short feedback survey.

**Deliverables:**

- Number of Kits checked out (goal: 750 check-outs)
- Savings estimated based on number of Kit check outs

**Date Initiated:** April 2014

**Date Completed:** Dec 2015 (ongoing)

**Original Budget (Cumulative):** \$35,000

**Final Cost (Cumulative):** \$22,478

**Local Match Contribution:** \$0

**Use of Unspent Funds:** Unspent

**Project Reimbursed for LG Staff Time (Y/N):** Y – LGP Implementer staff time

#### Best Practices

- Develop programs that provide residential customers holistic energy-related opportunities (energy savings, weatherization, and water use reduction).
- Develop programs that address all residential sectors.
- Develop programs that incorporate community/neighborhood based education, outreach and implementation.
- Develop programs that remove barriers found in typical home efficiency programs (having strangers in the home, time commitment of an appointment window, etc.)

#### Lessons Learned

- Highly targeted outreach required to ensure checkout activity at all branches.

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- Outreach highly influences checkout rates and must be done regularly.
- Interest highly varied by area, and often inversely tied to socioeconomics.
- Bilingual staff beneficial at outreach events.

### Knowledge Transferred

- Shared outreach materials with Sonoma County Energy Watch.
- Shared data collection and metrics calculation best practices with San Mateo Energy Watch.
- Shared at annual SEEC conference by PG&E as the example of innovation that Local Government Partners can bring to the energy efficiency space.

### Benefit to Local Government

- Program resources available and shared with smaller cities in Santa Clara County, including collateral files, physical collateral, toolkits and administrative assistance.
- Program resources available and shared with other regional Energy Watch programs.
- Energy and water efficient items distributed directly to residents in smaller cities in Santa Clara County, providing them with a government service.
- Provides residents an introduction to energy efficiency, allowing for future opportunity to engage in other Energy Watch programs.

### Benefit to the State

- Program addresses existing building stock.
- Provides tools to educate on and provide solution to plug load energy waste.
- Promoted within low income populations.
- Creates an innovative education and outreach strategy that can be replicated in other communities.
- Aligns with State's education and outreach goals to provide high levels of awareness of the value of energy efficiency through integrated marketing.

### Accomplishments

- Over 985 Kits were checked out across participating libraries from 2013 – 2015, far exceeding the goal of 750.

### Significant Challenges

- Staff turnover at libraries (implementation partner) highly influenced checkout rates due to decreased program awareness and promotion over time.



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- Slight distrust from public; toolkit has been misunderstood as item for purchase.
- Magnitude of outreach efforts required to maintain checkout rates was initially underestimated.
- Participation self-selective; residents already interested in energy efficiency/those who have already implemented efficiency measures were found to be more receptive to the program than those with low awareness.
- Bilingual staffing availability was limited.
- High moving cost to update toolkit contents to reflect improved technology (ex: CFL to LED: high upfront material cost, cost to update collateral, translations and reprint).

### 18.9 Silicon Valley Energy Map

**Local Government Partnership:** Silicon Valley Energy Watch

**Project Purpose:** Promote use of the Map at 5 events / year

**Project Scope and Components:** SVEW will continue to update (annually), expand, enhance, and conduct outreach around the Map

**Deliverables:**

- Number of outreach events promoting the Map
- Number of Map website "hits"

**Date Initiated:** Jan 2013

**Date Completed:** Dec 2014

**Original Budget (Cumulative):** \$50,000

**Final Cost (Cumulative):** \$50,000

**Local Match Contribution:** \$0

**Use of Unspent Funds:** N/A, all funds spent.

**Project Reimbursed for LG Staff Time (Y/N):** Y – LGP Implementer staff time.

#### Best Practices

- Develop programs that demonstrate local sustainability activities, and to understand the communitywide effort towards achieving energy reduction goals.
- Develop programs that track progress towards achieving the State's ambitious energy goals.
- Develop programs that provide the community with a wide variety of information and resources for next steps to implementing energy efficiency, renewable energy, and green building projects, through tips, rebates, financing options and best practices.

#### Lessons Learned

- Utilize a highly-flexible platform to allow for quick and easy adaption to newly relevant information, technology, and user needs.
- Allow for a high-level of promotional funding to keep people's attention over time and

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bring in new and repeat users.

- Data used in programs must be updated frequently to ensure that information is current and therefore seen as valuable.

### Knowledge Transferred

- Silicon Valley Energy Map was presented at ACEEE conference in 2010.
- Map and corresponding data was available online to general public, including other local governments.

### Benefit to Local Government

- Provided open-access, county-wide energy use and renewable energy project data.
- Allowed local government entities to view both project specific and county-wide energy trends to inform decision making.
- Platform included solar potential calculator, providing a high level cost benefit ratio to potential solar consumers, to assist in their decision making regarding project feasibility and value. This acted as a county-wide promotional tool for renewables, contributing to the sustainability goals of the greater South Bay area.
- The map contained online forms which allowed for case study submittals.
- Map data was downloadable, in customizable queries and area summaries.

### Benefit to the State

- Acted as an internet-based marketing, education and outreach tool.
- Promoted renewables projects, in support of AB32 emissions reduction targets.
- Developed an innovative internet-based networking portal, allowing for energy efficiency practitioners and consumers to share information and solutions regarding energy efficiency programs and measures.

### Accomplishments

- Completed full update of Map data in 2013.
- Conducted outreach at one community event.

### Significant Challenges

- Unable to plan for long-term website maintenance and updates within program contract cycles. Limited staff time for providing and managing data uploads.
- With staffing turnover, maintaining consistent outreach presence proved extremely

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difficult.

- No established protocol for utilities to share energy use data for outreach purposes.
- Multiple energy utilities providing energy use data.
- Data confidentiality made data difficult to get at the project level.

## **19. Strategic Plan Menu # 5 – Local Government Energy Efficiency Expertise**

*Local government energy efficiency expertise becomes widespread and typical.*

### **19.1 Residential and Commercial Energy Efficiency Program Consultation**

**Local Government Partnership:** Fresno Energy Watch

**Implementer:** City of Fresno

**Project Purpose:** Increase local government awareness of energy efficiency strategies.

**Project Scope and Components:** Fresno Energy Watch assist jurisdictions throughout the Central Valley and other regions of California by integrating best practices, program information, and marketing strategies for effective energy efficiency program development and implementation. Fresno Energy Watch will conduct at least 10 consultation events, assisting jurisdictions to engage community stakeholders.

**Deliverables:**

- Number of workshops, forums, council presentations, or other public information gatherings.

**Date Initiated:** July 2013

**Date Completed:** Ongoing

**Original Budget (Cumulative):** \$25,000

**Final Cost (Cumulative):** \$20,000

**Local Match Contribution:** None

**Use of Unspent Funds:** Unspent, \$5,000, reallocated to the Home Energy Tune Up (HETU) program.

**Project Reimbursed for LG Staff Time (Y/N):** Y – LGP Implementer staff time.

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### Best Practices

- Provide detailed process information; explain the entire operation so a strong understanding of the program operation and methodology can be understood.
- Where possible utilize examples to help individuals see and visualize the benefit.

### Lessons Learned

- Do not rely on others assuming the responsibility to take action.
- Prepare for and provide opportunity for audience to ask an array of questions to help encourage participation in information exchange.

### Knowledge Transferred

- Information shared through routine communication channels like collaborative meeting or energy watch meetings.
- Information shared with other implementers interested in pursuing similar programmatic operations

### Benefit to Local Government

- The Local Government is viewed as a resource of information
- This helps promote community energy efficiency through potential participant education

### Benefit to the State

- The education and distribution of energy efficiency to potential participants and other organizations allows for programs and individuals to make the most cost effective decisions for their specific areas and needs

### Accomplishments

- 6 events were held, providing information to more than 100 community stakeholders.
- The LGP has been contacted by multiple implementers to help them understand options and opportunities to apply similar concepts within their region
- Our presentations and presence has been requested by elected officials to bring assistance to their constituents within the LGP's operating region

### Significant Challenges

- Administrative time to relay a detailed concise message or information

## **19.2 Water Energy Nexus Training for Underserved Municipalities**

**Local Government Partnership:** Fresno Energy Watch

**Implementer:** City of Fresno

**Project Purpose:** Promote energy efficiency expertise among local government staff in the Fresno County area.

**Project Scope and Components:** Train local government staff from 8-12 municipalities (between 50-75% of total jurisdictions in Fresno County) on the Water Energy Nexus, since water conservation is a priority in the drought-stricken Central Valley region.

**Deliverables:**

- Report number of classes conducted

**Date Initiated:** January 2015

**Date Completed:** Ongoing

**Original Budget (Cumulative):** \$50,000

**Final Cost (Cumulative):** \$50,000

**Local Match Contribution:** None

**Use of Unspent Funds:** N/A

**Project Reimbursed for LG Staff Time (Y/N):** Y – LGP Implementer staff time.

### **Best Practices**

- Local governments manage water infrastructure and have the ability to influence and/or adopt water policy; provide local governments information about the extent and ways water conservation promotes energy efficiency to better inform local action.

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### Lessons Learned

- Class notification should be done with sufficient advance notice to increase participation
- Provide details to local government so they can assist in recruiting participants
- Utilize all local governments channels to disseminate class information

### Knowledge Transferred

- Knowledge transferred through regular meetings of Central Valley LGP collaborative and energy watch meetings

### Benefit to Local Government

- Better trained personnel working on water conservation measures, better utilization of energy and appropriate watering procedures for improved landscape control

### Benefit to the State

- Meetings targeted Statewide water use mandates and energy conservation

### Accomplishments

- Conducted three (3) Water Energy Nexus classes with a total of 36 attendees.
- Participants learned new techniques and understanding of the benefits of water conservation and energy

### Significant Challenges

- Participation was a constant challenge mainly due to municipality short staffing and the available participants having to handle last minute emergencies



### 19.3 Computer Literacy classes

**Local Government Partnership:** Fresno Energy Watch

**Implementer:** City of Fresno, subcontract with Great Valley Center

**Project Purpose:** Provide community members information and tools to enable action on energy efficiency.

**Project Scope and Components:** Conduct between 12-16 energy-efficiency training segments as a part of existing computer literacy trainings for community members. Specifically, enroll each participant in PG&E's My Energy online portal, conduct a virtual Home Energy Performance assessment, and enroll participants in appropriate programs such as the Central Valley Home Energy Tune Up (CVHETU) to facilitate action.

**Deliverables:**

- Report number of classes conducted and participants at each

**Date Initiated:** January 2015

**Date Completed:** Ongoing

**Original Budget (Cumulative):** 30,000

**Final Cost (Cumulative):** \$20,000

**Local Match Contribution:** None

**Use of Unspent Funds:** Unspent, \$10,000, reallocated to the Home Energy Tune Up (HETU) program.

**Project Reimbursed for LG Staff Time (Y/N):** Y – LGP Implementer staff time.

| • Best Practices  |
|---|
| <ul style="list-style-type: none"><li>• Outreach channel through schools</li><li>• Have home owner children take information of potential classes home to their parents</li><li>• Have trainers practice with their own residential account</li></ul> |



| • Lessons Learned  |
|--|
| <ul style="list-style-type: none"><li>• Have trainers practice with their own residential accounts to troubleshoot potential</li></ul> |

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issues before training occurs

- Develop a more concise curriculum and delivery process to help guide participants through the entire class and not get overwhelmed

### • Knowledge Transferred

- Knowledge transferred through regular meetings of Central Valley LGP collaborative and energy watch meetings

### • Benefit to Local Government

- Help their underserved hard to reach communities within their jurisdiction

### • Benefit to the State

- Help educate the underserved overlooked communities to bring them benefits through available program that can assist them

### • Accomplishments

- Performed two (2) training classes with a total of 50 participants.
- Assisted many participants that would otherwise not have been served through direct programs

### • Significant Challenges

- Advance notification of classes to maintain consistency in daily class participation

### 19.4 Energy Advisor Pilot

**Local Government Partnership:** Fresno Energy Watch

**Implementer:** City of Fresno

**Project Purpose:** Provide training to enable further energy efficiency action.

**Project Scope and Components:** Provide training to residential customers who had participated in residential assessments by the Central Valley Home Energy Tune Up (CVHETU) program, to provide clear options for taking action to reduce unnecessary energy consumption.

**Deliverables:**

- Report on the residential project conversion impact

**Date Initiated:** January 2015

**Date Completed:** Ongoing

**Original Budget (Cumulative):** \$50,000

**Final Cost (Cumulative):** \$50,000

**Local Match Contribution:** None

**Use of Unspent Funds:** N/A

**Project Reimbursed for LG Staff Time (Y/N):** Y – LGP Implementer staff time.

#### Best Practices

- Contact participants as soon as possible
- Remain unbiased; just provide supporting information/guidance
- Ask questions and listen to participants

#### Lessons Learned

- Make sure participants understand the energy advisor purpose
- Contact participants as soon as possible after their report is delivered

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### Knowledge Transferred

- Knowledge transferred through regular meetings of Central Valley LGP collaborative and energy watch meetings

### Benefit to Local Government

- Help quantify residential conversions and HVAC change outs to better inform the HVAC To-Code Pilot, guide participants towards conversion supporting their goals and needs

### Benefit to the State

- Quantification of conversions, help educate participants on energy and water conservation

### Accomplishments

- Performed follow up on approximately 20% of HETU participants and helped establish a conversion rate standard

### Significant Challenges

- Many people make changes but there is no way of knowing the effect of their conversions or trying to quantify the energy or resource saved

### 19.5 GHG Emissions Inventory Assistance for Local Governments

**Local Government Partnership:** Great Valley Center (now Valley Vision)

**Project Purpose:** Engage local governments in the San Joaquin Valley in the process of assessing greenhouse gas (GHG) emissions, providing local government staff with training, no-cost resources and recommendations throughout the process.

**Project Scope and Components:** Building upon two successful iterations of this GHG inventory assistance program, GVC assisted fourteen local governments in developing GHG inventory reports based on each local government's relative progress in addressing GHG emissions. Some local governments had already completed inventories of local government operations, and were provided support for community-wide GHG emissions inventories. Some local governments had taken no action prior to 2013, and were provided entry-level assistance.

During and following development, GVC staff engaged local government participants in utilizing planning resources, such as the SEEC ClearPath California tool. GVC provided project management support, employed five interns from local colleges and universities in the data collection and analysis components, and provided local government staff with resources and assistance in engaging local leaders in adopting recommended energy efficiency practices.

**Deliverables:**

- One Local Government Operations GHG Emissions Inventory Report for a local County
- 13 Community-Wide GHG Emissions Inventory Reports (two Counties, 11 cities)
- Organized reports of data collected
- Summary of methodologies used to calculate GHG inventory
- Recommended next steps
- Engagement of local leadership to encourage follow-through on recommendations

**Date Initiated:** April 2013

**Date Completed:** April 2014

**Original Budget (Cumulative):** \$ 114,656.26

**Final Cost (Cumulative):** \$114,656.26

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**Local Match Contribution:** \$0

**Use of Unspent Funds:** None

**Project Reimbursed for LG Staff Time (Y/N):** Y (PG&E Partnership at GVC)

### Best Practices

- Capacity building for local governments lacking resources or expertise in energy and climate action planning.
- Assessment of GHG emissions using the Local Government Operations Protocol, approved by the California Air Resources Board, and the National Community Protocol for community-wide GHG emissions.
- Data analysis conducted by subject-matter experts, under the advisement of ICLEI – Local Governments for Sustainability, the author of the protocols.
- Reporting of GHG emissions, relevant energy usage and cost, methodologies and recommendations.

### Lessons Learned

- Since many local governments in rural areas lack the internal capacity to conduct GHG emissions analysis and planning, the GVC served a valuable role as both subject-matter-expert and project manager for GHG analysis. The work may not have occurred otherwise.
- Local governments valued the quantification of the cost of activities that generate GHG emissions, such as energy consumption, as much as, if not more than, GHG emissions equivalencies.

### Knowledge Transferred

- Local government staff were provided training, no-cost resources and project management assistance in an effort to encourage replication of the process for future GHG emissions inventories.
- Local government officials were provided material and presentations underscoring the importance of local government action in energy and climate initiatives.
- Five interns from local colleges and universities were trained by GVC and ICLEI on principles of GHG emissions analysis.

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### Benefit to Local Government

- Local government staff were educated on the connection between GHG emissions and energy usage.
- Local governments were provided GHG emissions inventory reports and tools to enable energy and climate action planning.

### Benefit to the State

- Local governments serve as leaders in communities in reducing GHG emissions, pursuant to the State's AB 32 goals.

### Accomplishments

- Presentation of GHG emissions inventories were made to local governments at various levels. These included:
  - 10 elected officials
  - 10 city managers/county administrators/department directors
  - 9 local government management staff
- A total of 14 GHG emissions inventories were completed and delivered to local governments for future use.
- Five interns from local colleges and universities were provided detailed instruction and hands-on experience with GHG analysis.

### Significant Challenges

- Local governments in rural areas are under-staffed and under-trained, and lack the ability to assess GHG emissions without outside assistance.
- Staff availability in under-staffed agencies delayed the data collection process.
- Climate-related efforts are a low priority among many local elected officials in the northern San Joaquin Valley, posing a challenge to local planning departments tasked with assessing GHG emissions and recommending mitigation strategies.

### 19.6 GHG Emissions Inventory Assistance

**Local Government Partnership:** Great Valley Center (now Valley Vision)

**Project Purpose:** Energy Efficiency and Economic Development

**Project Scope and Components:** Hosting a summit for local governments to help better understand the link between economic development and energy efficiency strategy adoption.

**Deliverables:**

- Economic Development Summit for Local Governments held November 21, 2013

**Date Initiated:** August 2013

**Date Completed:** November 2013

**Original Budget (Cumulative):** \$ 6,000

**Final Cost (Cumulative):** \$ 5,828.27

**Local Match Contribution:** None

**Use of Unspent Funds:** Labor for GHG inventory work

**Project Reimbursed for LG Staff Time (Y/N):**Y

#### Best Practices

- Assembling local governments is made easier when a keynote who can impact legislation, such as State Senator Anthony Cannella, attends.
- Highlighting relevant energy efficiency resources and programs with clear linkages to local government priorities is critical to program success. Therefore, utilities and other administrators of relevant resources should be included in such events.

#### Lessons Learned

- Expect many last minute cancellations, no shows, and (so-called) show-ups or individuals who did not register but “showed up” anyway.
- Keep the agenda tight even if it means a shorter program across the board.
- Keep the goal of the assembly in the forefront of all discussions so that the program



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promises are fulfilled.

### Knowledge Transferred

- Energy efficiency adoption can be successful in an environment of sharing ideas, forwarding best practices, and understanding barriers to success.

### Benefit to Local Government

- Engagement in energy efficiency as it relates to keeping jobs in place by saving resources.
- Engagement with statewide legislator (Sen. Anthony Canella) on local needs.
- Participation by the Local Government Commission reinforced the many resources available to smaller jurisdictions.

### Benefit to the State

- A forum to bring local government in front of state legislators enhances understanding.
- Jurisdictions recognized the value of resources available to them from the State.

### Accomplishments

- 28 local jurisdictions were represented at the Forum.
- As a result of the forum, seven additional CAPs were performed in the program.

### Significant Challenges

- Understanding the requirements of the state policy as it relates to local governments.

### 19.7 Small Community Outreach

**Local Government Partnership:** Kern Energy Watch Partnership

**Project Purpose:** Provide energy efficiency information to residents of small communities.

**Project Scope and Components:** Local government will share their energy efficiency messages in mailers to residents within their cities, success stories on their websites, and through energy awareness campaigns that urge residents to trade in old inefficient appliances for newer more energy efficient models. They will receive rebates from So Cal Gas & PG&E for those purchases. With the successful implementation of energy awareness campaigns the LGPs will receive additional funding to complete energy efficiency projects identified through energy audits performed by Staples Energy

**Deliverables:**

- Number of utility rebates tied to the purchase of energy efficient appliances through the City's energy efficiency campaign.
- Number of non-efficient Christmas lights exchanged for energy efficient LED strands.

**Date Initiated:** October

**Date Completed:** December 2015

**Original Budget (Cumulative):** \$15,000

**Final Cost (Cumulative):** \$15,000

**Local Match Contribution:** None

**Use of Unspent Funds:** N/A

**Project Reimbursed for LG Staff Time (Y/N):** Y – LGP Implementer staff time.

| Best Practices  |
|---|
| <ul style="list-style-type: none"><li>• Energy Watch staff leverage existing resources to more strategically direct resources to customers</li><li>• Organize separate resources into a comprehensive, turnkey solution for customers</li></ul> |

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### Lessons Learned

- This type of project is more implementation than strategic planning, and as such will be included under Direct Implementation in future scopes of work. Direct Implementation activity is evaluated separately than strategic plan activity.

### Knowledge Transferred

- Area residents and cities were provided information about energy efficient appliances, light bulbs and Christmas lights.

### Benefit to Local Government

The local government that participated in this campaign benefit by being seen as a resource in their community for energy efficiency information and programs. They benefit by increasing the awareness of their residents and by assisting them with exchanged old inefficient equipment with newer more efficient models.

### Benefit to the State

Any efforts at the local level aimed at decreasing energy consumption helps to achieve the State's energy efficient goals.

### Accomplishments

- The City of Wasco developed a community outreach campaign that included a different energy efficiency message for each month during Oct. Nov. & Dec. of 2015. inserted into the October billing cycle for utility customers.
- The City provided an energy efficient LED flashlight for use on Halloween for pumpkins or child safety. 500 LED flashlights were ordered, with the majority being passed out to children during a City sponsored Trunk or Treat event.
- 500 LED flashlights were ordered, with the majority being passed out to children during a City sponsored Trunk or Treat event
- The City created a "Don't be a Turkey, save ...." month where the City provided tips on the LGP's website and in a mailer including energy efficient tips similar to those on the Kern Energy Watch website.
- The City also purchased approximately 1000 LED light bulbs for use in home lighting at the front door or porch. A maximum of two lights per Wasco address were provided when utility customers paid their bills at the City's Finance Department.
- The City purchased approximately 500 strands of LED Christmas Lights and requested citizens to come in and replace one strand of regular non-efficient Christmas lights with a

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new LED strip provided by the City. By the end of December, all strands were given out and the non-energy efficient strands were recycled.

### Significant Challenges

- There were no significant challenges

### 19.8 Coordination with emerging tech and remote retro-commissioning programs

**Local Government Partnership:** Marin County Energy Watch

**Project Purpose:** Work with retro-commission program to identify public facilities for which their services would be appropriate and help them implement a local project.

**Project Scope and Components:** MCEW worked with CleaResult to identify projects that would fit their remote retro-commissioning program and staff that would be interested in participating. Ultimately, the County, City of San Rafael and two school districts participated.

**Deliverables:**

- Number of agencies meeting with CleaResult
- Number of agencies completing upgrades as a result of remote retro-commissioning

**Date Initiated:** February 2014

**Date Completed:** September 2014

**Original Budget (Cumulative):** \$ 5,000

**Final Cost (Cumulative):** \$ 5,000

**Local Match Contribution:** None

**Use of Unspent Funds:** N/A

**Project Reimbursed for LG Staff Time (Y/N):** Y– LGP Implementer staff time.

#### Best Practices

- Leverage available resources (CleaResult) to minimize cost while identifying appropriate facilities/staff to improve participation in an energy saving remote retro-commissioning project.
- Test new technology for identifying energy efficiency projects or controls updates for energy savings.

#### Lessons Learned

- The LGP was able to identify some controls scheduling changes that resulted in energy savings with no cost. Showed great added value and built trust with the customers.

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- The LGP was able to demonstrate the value of Smart Meter data. In fact, one customer complained that the program did not provide the same level of granularity on their gas meter.

### Knowledge Transferred

- The LGP shared the information on the available resource with Marin's city/town representatives via the Marin Climate and Energy Partnership.

### Benefit to Local Government

- The two local governments that participated in the project appreciated the value of the interval data and the ability to diagnosis problems remotely. Built trust and interest in more energy efficiency projects.

### Benefit to the State

- Direct energy savings from controls changes and potential future savings from demonstration of the value of the service.

### Accomplishments

- Two local jurisdictions and two school districts participated in meetings and data reviews with CleaResult
- One of the jurisdictions (County of Marin) implemented the recommendations at two of its facilities to achieve savings and receive a rebate.

### Significant Challenges

- Staff changes at one of the school district disrupted one of the projects – it was difficult to get new staff interested and up to speed.
- Lack of granularity of natural gas data limited the ability of the program to identified issues that one of the jurisdictions was having.

### 19.9 Outreach/Education

**Local Government Partnership:** San Francisco Energy Watch

**Project Purpose:** Promote energy efficiency with outreach and education.

**Project Scope and Components:** 1) Target sectors for expansion of Green Business program (within which SF Energy Watch provides energy efficiency retrofits), supporting technical analysis, and recruitment. 2) Pilot occupant engagement via energy monitoring at SF Environment. 3) Market residential PACE financing.

**Deliverables:**

- Green Business: Identify target sector for expansion
- Green Business: Adapt Green Business criteria checklist to the new sector, and recruit participants
- Energy Monitoring: Install plug-load monitoring system.
- Energy Monitoring: Run intra-office occupant engagement study.
- Residential PACE: Prepare program documents including technical standards and quality assurance protocol. Provide training to contractors.

**Date Initiated:** Sept 2013

**Date Completed:** December 2014

**Original Budget (Cumulative):** \$64,000

**Final Cost (Cumulative):** Not specified

**Local Match Contribution:** Not specified

**Use of Unspent Funds:** Not specified

**Project Reimbursed for LG Staff Time (Y/N):** Y – LGP Implementer staff time.

| Knowledge Transferred  |
|--|
| <ul style="list-style-type: none"><li>• Energy Watch worked with SF Environment Green Business staff to promote the LGP resources to Green Businesses.</li></ul> |

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### Accomplishments

- Educational material prepared
- Green business templates completed
- Outreach efforts reached approximately 125 other local government representatives and approximately 450 community members.



### 19.10 Software Augmented audits/Mini-RCx

**Local Government Partnership:** San Francisco Energy Watch

**Project Purpose:** 2-3 pilot sites in each Task Force member's jurisdiction territory

**Project Scope and Components:** Participation in Mini RCx Task Force and selection of 2-3 pilot buildings.

**Deliverables:**

1. Number of pilot projects selected

**Date Initiated:** January 2015

**Date Completed:** December 2015

**Original Budget (Cumulative):** \$145,000

**Final Cost (Cumulative):** \$83,023.89 (2014). Mini-RCx combined with Software Augmented Energy Audit project in 2015.

**Local Match Contribution:** Not specified

**Use of Unspent Funds:** Not specified

**Project Reimbursed for LG Staff Time (Y/N):** Y – LGP implementer staff time.

| Accomplishments  |
|--|
| <ul style="list-style-type: none"><li>• Conducted 3 additional rounds of outreach and concluded enrollment.</li><li>• Completed on-site audits at a total of 12 sites.</li><li>• Completed interval meter data analysis for 156 sites.</li><li>• Mini-RCx: Conducted one installation of wireless thermostats &amp; provided training to customer to remotely manage their units.</li><li>• Results included 6 Energy Watch projects, with follow up planned for 7 additional sites in 2016. Audits implied potential for HVAC and RCx measures.</li><li>• Work found that since EBCO requires a whole building evaluation every 5 years, SFE could target and encourage certain buildings to utilize the retrocommissioning option as their follow up assessment.</li></ul> |

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### 19.11 Commercial Refrigeration Retirement

**Local Government Partnership:** San Francisco Energy Watch

**Project Purpose:** Conduct surveys of 150 businesses; collect pre- and post-installation data at 40 sites

**Project Scope and Components:** Conduct a study to (1) quantify the potential energy savings from early retirement of commercial reach-in coolers and freezers, and ice machines, and assess ice machine load shifting opportunities, and (2) develop ordinance language and provide baseline efficiency information for future efficiency programs based on the findings.

**Deliverables:**

1. Number of surveys
2. Number of sites with pre and post installation data
3. Final Energy Savings Report
4. Final Project Report

**Date Initiated:** Sept 2013

**Date Completed:** December 2015

**Original Budget (Cumulative):** \$97,000

**Final Cost (Cumulative):** 195,076

**Local Match Contribution:** Not specified

**Use of Unspent Funds:** Not specified

**Project Reimbursed for LG Staff Time (Y/N):** Y – LGP Implementer staff time.

| Lessons Learned   |
|---|
| <p>Key findings;</p> <ul style="list-style-type: none"><li>• Over 70 customers eligible to replace existing refrigeration equipment with new high efficiency equipment at a 50% discount, but 35 customers chose to take advantage of this offer.</li></ul> |

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- If new equipment were purchased at the retail price, only 6 customers (17.1%) would have a payback of less than 5 years based on energy savings alone.
- For the type equipment studied in the Cool Savings Program, PG&E offers rebates between \$75-\$600 (3-11% of retail price), depending on the type of equipment purchased. When the PG&E rebate is taken into consideration, 8 customers (22.9%) would have a simple payback of less than 5 years.
- With the 50% discount offered through the Cool Savings Program, 23 customers (65.7%) had a simple payback of less than 5 years.
- A Direct-Install Efficiency program could provide a calculated incentive for replacing existing refrigeration equipment with new high efficiency equipment.
- Incentive would be calculated based on the measured energy consumption of the existing refrigeration equipment and the AHRI rated energy consumption for the new equipment. This increased rebate could help motivate additional inefficient refrigeration replacements and user education/maintenance.

### Accomplishments

- 102 business surveys; collected pre-installation data from 62 sites and 25 post-installation data from sites. Started pre-monitoring at 3 customer sites.
- Completed pre-monitoring at 1 customer site.
- Completed post-monitoring at 7 customer sites.
- Signed up ice maker replacement.
- Continued to reach-out to customers to participate in the Refrigeration Project.
- To date, signed up a total of 35 customers out of a goal of 40 customers to have their old refrigeration equipment replaced. .
- Completed review of energy savings report and completed draft of SFE Refrigeration Pilot Final Report. could target and encourage certain buildings to utilize the retrocommissioning option as their follow up assessment.

### 19.12 Sustainable Chinatown Community Project

**Local Government Partnership:** San Francisco Energy Watch

**Project Purpose:** The “Sustainable Chinatown” Initiative is a collaborative project between Chinatown Community Development Center (CCDC), the City of San Francisco departments of Planning and Environment, Enterprise Community Partners (ECP), and the San Francisco Foundation. The multidisciplinary team aimed to promote community sustainability and resilience, energy and resource efficiency, and social equity in this traditionally hard-to-reach community. The team worked to achieve these goals by creating a Sustainable Chinatown Plan that employs “eco-district” planning approaches, neighborhood-scale data development and analysis, and targeted engagement and outreach.

**Project Scope and Components:** Analyze Chinatown building stock, and develop strategies to encourage smaller commercial buildings to conduct energy benchmarking and identify energy efficiency opportunities.

**Deliverables:**

1. Establish a baseline of building stock and resource usage in Chinatown;
2. Review energy data available through Existing Commercial Building Energy Performance Ordinance (ECBEPO), BayREN Multifamily Program, permit data and other public records to identify building “typologies” and develop case studies describing energy loads and potential energy efficiency opportunities; and
3. Work with community partners and municipal agencies, to develop a community-wide sustainability plan for Chinatown and conduct outreach to encourage ECBEPO compliance and energy efficiency improvements.

**Date Initiated:** Sept 2013

**Date Completed:** December 2015

**Original Budget (Cumulative):** \$110,000

**Final Cost (Cumulative):** \$89,605.77

**Local Match Contribution:** Not specified

**Use of Unspent Funds:** Not specified

**Project Reimbursed for LG Staff Time (Y/N):** Y – LGP Implementer staff time.

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### Best Practices

- Collaboration between departments (Planning and Environment) opened new connections and opportunities to use public building data, property types, and energy program data to develop “typologies” and associated energy efficiency opportunities. The process has been iterative but the typologies are established and the energy data continues to be developed and applied.
- Since this is new territory, the project team is “learning as we go”, and generally pleased with the results thus far. In fact the project team is interested in expanding the project and methodology to explore broadening the analysis model to other parts of the City.

### Accomplishments

Using baseline data gathered about the communities building stock and housing characteristics the team then focused on developing building asset data and community-scale energy consumption to inform:

1. Energy efficiency potential
2. “High opportunity” energy conservation measures (ECMs), and
3. Outreach strategies to encourage the smaller multifamily and commercial buildings in this area to implement energy efficiency.

Highlights include:

- Data merging, mining, and cleaning of multiple datasets (ECBEPO reporting; San Francisco Energy Watch; BayREN Multifamily Energy Efficiency Program and Commercial Building Inventory Tool) to assist in the compilation of metrics on the energy performance and energy efficiency potential of the building stock, as well as the energy load of the neighborhood.

#### Methodology

In order to encourage data-driven decision making for actionable energy efficiency projects in Chinatown, the team aimed to highlight the energy and financial savings potential of specific building types that are largely representative of the neighborhood’s building stock. To create this characterization, SFE extracted data from the San Francisco Planning Department’s land use database for addresses located in our target geographic boundary. Through this data pull, SFE was able to determine the breakdown of typical building patterns for the 549 buildings located in the project area including:

- Property types

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- Construction types
  - Building height,
  - Average number of units per building
  - Building vintage
  - Residential property type, and
  - Building size
- Subsequently, SFE identified 8 distinct building “Typologies (4 residential and 4 commercial).
- Where available, SFE supplemented this data with benchmarking and energy audit data from the ECBEPO, as well as data for addresses that had successfully completed energy efficiency projects (and received incentives) with the San Francisco Energy Watch (SFEW) team and/or the BayREN multifamily program. Energy audit and completed energy efficiency project data included:
  - ECM type, total kWh savings per ECM, total gas savings per ECM, total project cost, and total incentive paid.
- By augmenting the building stock characterization with this data, SFE was able to include a list of ECMs, and their subsequent potential savings opportunities, that were commonly implemented in each typology.
- To adjust for possible major renovations that would impact this presumed efficiency potential, SFE extracted, cleaned, and manipulated Department of Building Inspection (DBI) data (both commercial and residential) to normalize the building typology with summary statistics on any major upgrades that a building might have completed since initial first construction that could account for any alterations in its energy performance.
- Project team determined the most efficient way to share, store, and display the baseline data (web mapping/GIS tool).
- Project team created maps on the building and neighborhood-level based on the data collected.
- Performed other sustainability data analysis;
  - From other data sources (GoSolarSF program, DBI permit history), project team developed data on solar energy deployment and potential.
  - Received vehicles miles traveled (VMTs) data in and out of Chinatown from SFCTA to calculate transportation-related GHGs.
  - Coordinated discussions with Recology to research available waste data in Chinatown (routes, recycling, landfill, and composting rates).
- Data team held regular meetings with met with San Francisco Energy Watch to explore

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how to create prototypes of buildings with completed project data.

- Data team held regular meetings with CCDC to share the team's progress.

### Significant Challenges

- Data sets vary greatly in terms of accessibility, completeness, usefulness, format consistency, among other factors. This has resulted in time-intensive “scrubbing” of data in order to create the most reliable set of data describing the elements the project team is interested in.
- SFE has heard concerns from data providers regarding protection of sensitive data, confidentiality, and the like. The data team has worked closely with key data providers (PG&E, SFPUC, DBI) to ensure that those important objectives are met while providing the community level insight into energy and sustainability performance and improvement potential.



### 19.13 Commercial Energy Efficiency 2.0: 2030 District & ICP

**Local Government Partnership:** San Francisco Energy Watch

**Project Purpose:** See Scope and Components

**Project Scope and Components:** Expand private and public sector activities to expand opportunities to deliver deeper savings in the commercial building sector. Building on current efforts (i.e. Investor Confidence Project partnership; GreenFinanceSF/commercial PACE, ECBO, and San Francisco 2030 District) to continue and expand market actor engagement and capacity building in support of holistic, comprehensive energy efficiency projects.

**Deliverables:**

- 2030 property enrollment forms and analysis
- (5) ICP project developer trainings
- (1) Project developer-financier networking event

**Date Initiated:** Sept 2013

**Date Completed:** December 2015

**Original Budget (Cumulative):** \$55,000

**Final Cost (Cumulative):** \$32,593.10

**Local Match Contribution:** Not specified

**Use of Unspent Funds:** Not specified

**Project Reimbursed for LG Staff Time (Y/N):** Y – LGP Implementer staff time.

#### Best Practices

- The 2030 District represents an intriguing opportunity for engaging commercial real estate on managing and reducing energy in a portfolio of buildings. Having building owners and developers lead the way is viewed positively by the market as well as other key groups.
  - For example, the SF 2030 District received a California Energy Commission grant award to implement zero net energy retrofits at 150 Eddy Street – a 4

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story, 41,000 square foot affordable housing with mixed use/retail with project partners: CCDC, Integral Group, and NREL.

- San Francisco's 2030 District surpassed 10 million square feet of enrolled buildings in 2015 (29 individual buildings). Enrolled owners/managers include: City of San Francisco, JLL, Kilroy, SFPUC, Shorenstein, and Swig. All have committed to 2030 District energy, water, and transportation emissions reductions targets.
- In order to track the progress of the District's progress towards shared energy reduction targets, the District needs to increase participation from building owners, and request benchmarking data sharing by participating District members (recently initiated January 2016).
- Feedback on ICP from SFE staff, private developers, contractors, investors and software providers is very positive. Energy efficiency stakeholders have expressed a common need for a structure/system as provided by ICP to standardize processes and highlight best practices for energy project development.

### Accomplishments

- (2) in person ICP trainings for SF Environment energy program staff; planning for additional ICP Project Developer and Quality Assurance provider training (for private sector and staff, scheduled for October 2015); planning for second "SF Interconnect" event to bring together contractors, project developers and capital providers/finance program administrators for education and networking (October 2015) Co-hosted (with Environmental Defense fund and PG&E) second "SF Inter-connect" networking event for energy service companies, contractors, ESCO's, city staff, software providers, and project investors, highlighting the Investor Confidence Project system. Approximately 50 attendees.
- Partnered with ICP to provide 90 minute in-person Project Developer training for SF Energy Watch staff and private sector contractors and service providers. 20 attendees.
- 1 data/metrics committee meetings to merge SFPUC water consumption data with building data within the district. Set energy baseline of the District.
- Integrated with SFEW and PACE programs to increase use and project opportunities.

### Significant Challenges

- Engaging with building owners, private sector contractors and project developers regarding 2030 District activities and Investor Confidence Protocols remains a

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challenge given the time commitment required to be away from core business activities (e.g. engaging in building owner outreach to enlist more properties into the District; incorporating ICP and its learning curve into project development procedures vs. business as usual practices for building owners and EE project developers).

- The (mostly) private sector-led 2030 District initiative is entirely powered by volunteer time and resources, which makes it difficult to maintain Program momentum and increase engagement as volunteer resources will fluctuate over time, depending on core obligations of working group members etc.

### 19.14 Update the San Mateo County Energy Strategy

**Local Government Partnership:** San Mateo County Energy Watch

**Project Purpose:** Update the San Mateo County Energy Strategy to provide local government energy efficiency expertise.

**Project Scope and Components:** Provide an update to the San Mateo County Energy Strategy (SMCES) that was draft and adopted by the County and every city in San Mateo County by the end of calendar year 2009. Complete an update, leaving the SMCES as a foundational document. Provide an update to every city in San Mateo County.

Provide educational outreach to schools, energy benchmark schools sites as a lead in to Prop 39 efforts, meet with all public school districts to identify districts in needs of support, support target districts of need, and provide engineering services for schools.

**Deliverables:**

- SMCES update reports annually.

**Date Initiated:** January 2013

**Date Completed: ended:** December 2015

**Original Budget (Cumulative):** \$90,000

**Final Cost (Cumulative):** \$144,642

**Local Match Contribution:** \$0

**Use of Unspent Funds:** n/a

**Project Reimbursed for LG Staff Time (Y/N):** Y – LGP Implementer staff time.

| Best Practices  |
|---|
| <ul style="list-style-type: none"><li>• The SMCES provides a pathway to reducing energy and water use and the reduction of GHG emissions in San Mateo County.</li><li>• Cities should be provided an update to let them know progress made towards the goals and strategies outlined in the SMCES.</li><li>• Providing information to cities generates countywide collaboration.</li><li>• School districts, like cities, lack staff resources to leverage Prop 39 funds.</li></ul> |

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### Lessons Learned

- Data to update the SMCES tends to lag the end of the calendar year cycle, meaning it should be update mid-year.
- Coordinating CEC resources and expenditure plan requirements, with the 23 schools districts in San Mateo County proved challenging.
- Engaging the Office of Education was helpful to understand political and financial realities of the many school districts.

### Knowledge Transferred

- Update of the SMCES provides a record of progress towards SMC goals on energy and water.
- Knowledge of countywide progress creates collaboration.
- Update will be provided on the C/CAG and SMCEW website.
- Office of Education was provided with two updates on district progress towards their Prop 39 funds.
- Presentation were provided in schools on energy and water conservation in support of the County's Green Star Schools program.

### Benefit to Local Government

- The sharing of progress helps cities understand their role in the countywide effort.
- The same if true for County Offices of Education.

### Benefit to the State

- Energy and water use reduction, and reductions in GHG emissions in SMC helps the State meet its goals.

### Accomplishments

- SMCES updated once in 2014.
- Eight school districts were identified as being in need of staff support.
- Eleven school districts have completed expenditure plans in 2013-2015, two of which SMCEW supported and one SMCEW actually completed for the district.

### Significant Challenges

- SMCEW staff have little time to devote to the update of the SMCES document.

### 19.15 Casmalia School and Business Upgrades and Workshop for Community Members

**Local Government Partnership:** Santa Barbara County Energy Watch Partnership

**Project Purpose:** The purpose was to provide energy efficiency upgrades to the school, businesses and residents of this low-income community located in the unincorporated area of Santa Barbara County. The project also assisted Santa Barbara County in outreach to the community. The population of Casmalia is 238, and it is located about 12 miles west of Santa Maria. The project also provided assistance to the County of Santa Barbara in a program of outreach to further the importance of energy efficiency.

**Project Scope and Components:** Partnership provided Direct-Install energy upgrades to Winfred Wollum Elementary School and the Hitching Post Restaurant. These were accomplished through a mini-grant provided by the Santa Barbara County Energy Watch Partnership. The Partnership also provided an evening "Community Energy Program Workshop", which also included updates from the County of Santa Barbara 3<sup>rd</sup> District Supervisor and County Departments. The departments included Fire, Sheriff, Planning and Development, Roads, and Public Health. Other energy related agencies participated as well, including EmpowerSBC and American Eco. After food and presentations, the public stayed to sign up for and discuss programs available to them. The workshop highlighted a collaborative effort for the benefit of the residents of this low-income community, and was accomplished in collaboration with the County of Santa Barbara and the County's 3rd District Supervisor, Doreen Farr, who was the host of the event.

**Deliverables:**

- Provided lighting upgrade to Wilfred Wollum Elementary School.
- Provided lighting and energy efficiency upgrade to the Hitching Post Restaurant. The restaurant is the only business in Casmalia.
- Provided a workshop in coordination with Santa Barbara County for the 138 residents who live in Casmalia.
- Energy Efficiency information was either hand delivered or mailed to each residence in the Casmalia area.

**Date Initiated:** 1/2013

**Date Completed:** 10/2013

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**Original Budget (Cumulative):** \$15,000

**Final Cost (Cumulative):** \$9,699

**Local Match Contribution:** \$0

**Use of Unspent Funds:** redistributed to other projects

**Project Reimbursed for LG Staff Time:** Y – LGP provided grants to participating school

### Best Practices

- The strategy was to provide outreach to government, businesses and residents of this small, outlying community.
- Energy Efficiency information was either hand delivered or mailed to each household.
- The project was a collaborative effort between the Santa Barbara County Energy Watch Partnership and the County of Santa Barbara.

### Lessons Learned

- Getting support and involvement from the 3<sup>rd</sup> District Supervisor was key to the success of the project.
- County coordination enhanced the Energy Efficiency Workshop. County provided the Supervisor, Fire, Sheriff Department, Roads, Planning and Public Health Department.
- The Partnership benefitted by inviting EmPowerSBC, American Eco and Staples Energy to make presentations along with the Partnership and utility companies.
- Budget-strapped, small schools can benefit from upgrades when they are provided through the Partnership.
- Outlying businesses appreciate the outreach and programs. Without the specific outreach effort, this business may never have been approached to upgrade its energy use.
- More people will attend when you provide information and incentives that may not be specifically related to energy use, than would have attended just for a Partnership presentation.

### Knowledge Transferred

- Exceptional collaboration was established with the County of Santa Barbara and other agencies which laid the groundwork for future outreach events.
- The County Supervisor saw the successful results in person, and this cemented future involvement.
- Energy Efficiency was talked about in the school's classes and the Partnerships energy

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upgrades were explained. Hopefully, this was passed on to the parents.

- The event was discussed with other Partnerships, and information between the Partnerships shared at local and state conferences.

### Benefit to Local Government

- The total annual energy savings was over 45,000 kwh.
- Orcutt Union Elementary School District received an upgrade to Winfred Wollum School that was not budgeted for and was completely paid for by the Partnership.
- Santa Barbara County was engaged and involved in Casmalia, and they would not otherwise have provided an evening information workshop for the residents who live there.
- Several residents signed up for either the ESA or MIDI programs after the workshop.
- Business received an upgrade and provided testimony for the Partnership.

### Benefit to the State

- Energy efficiency upgrades were provided for this small, outlying community, including the school, the community's one business, and for its residents. This helps to meet the State's mandate for energy awareness to meet its goals of reduced greenhouse gas emissions.

### Accomplishments

- The total annual energy savings for the project was over 45,000 kwh.
- About 20% of the residents participated in the workshop. All attendees were appreciative of the event.
- The community's one school and one restaurant received upgrades through the Partnership.
- A strong pattern of cooperation with the County, its departments and other agencies was established.
- The Partnership made a presentation at UCSB at a sustainability summit about the outreach events organized by the Santa Barbara County Energy Watch Partnership.

### Significant Challenges

- Small, outlying communities are often left behind and it takes a significant, targeted effort to provide outreach to them.



### 19.16 Provide workshops, outreach and marketing materials for hard-to-reach businesses

**Local Government Partnership:** Santa Barbara County Energy Watch Partnership

**Project Purpose:** Incorporate hard-to-reach businesses into energy efficiency upgrades and provide energy efficiency information and outreach to these businesses. Hard to reach businesses included businesses in small industrial areas, very small businesses, Hispanic businesses, and businesses located in outlying areas.

**Project Scope and Components:** Provide workshops, outreach and marketing materials for hard-to-reach businesses. Connect them with resources for energy efficiency upgrades.

**Deliverables:**

- Businesses received energy efficiency upgrades and contributed to the Partnership meeting its energy savings goals for 2013-2015.
- Businesses in small industrial areas, outlying communities, and very small businesses were targeted by outreach.
- Over 300 hard to reach businesses were contacted, either directly, or through outreach resources of the Chamber of Commerce and marketing materials from the Santa Barbara County Energy Watch Partnership.
- Businesses received an invitation to the annual half-day Green Business Energy Efficiency Forum, presented by the Santa Barbara County Energy Watch Partnership, which included presentations on programs as well as displays and interaction with other businesses. This forum was held on July 23, 2014.
- They were also invited to energy efficiency presentations provided through the Manufacturers Association and organized by the Santa Maria Valley Chamber of Commerce.

**Date Initiated:** 01/2014

**Date Completed:** 12/2014

**Original Budget (Cumulative):** \$24,000

**Final Cost (Cumulative):** \$17,810

**Local Match Contribution:** \$0

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**Use of Unspent Funds:** Funds redistributed to other projects

**Project Reimbursed for LG Staff Time (Y/N):** N – Implementer is not LG

### Best Practices

- Strategy involved direct mailings, personal outreach, outreach using Chamber resources, workshops and other ways to provide energy efficiency opportunities for hard to reach businesses.
- Businesses were invited to presentations and workshops through the Santa Maria Valley Chamber of Commerce and the Manufacturers Association.

### Lessons Learned

- Businesses in outlying areas and very small businesses require persistent outreach to make energy efficiency a priority in their operations.
- Many businesses get calls and mailers for energy efficiency, so you have to approach them with the credibility of the Chamber of Commerce, the utilities and the cities as part of the overall Partnership.
- Hard to reach businesses have a smaller “payback” for energy efficiency based upon the cost to reach them, but they would not be reached otherwise. Their participation in workshops is smaller as well.

### Knowledge Transferred

- Persistent reminders and outreach ultimately pays off.
- Small businesses benefit from more than energy savings. A local dry cleaner benefitted from a lighting upgrade by better employee satisfaction, improvement in quality of work, more cleanliness in the facility, and ultimately, satisfied customers and increased sales.

### Benefit to Local Government

- County of Santa Barbara benefitted from participation by hard to reach businesses to help achieve its goals to reduce emissions.

### Benefit to the State

- Businesses contributed to energy efficiency goals of the State and helped reduce greenhouse gas emission.

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### Accomplishments

- Hard to reach businesses became involved in energy efficiency, energy upgrades and helped the Partnership fulfill its energy savings goals.
- Businesses participated in workshops and programs.

### Significant Challenges

- Hard to reach businesses takes considerable time and outreach.
- Higher cost to success ratio in outreach efforts targeting hard to reach businesses.

## **19.17 Outreach to Agricultural Businesses**

**Local Government Partnership:** Santa Barbara County Energy Watch Partnership

**Project Purpose:** Incorporate Agricultural Businesses into energy efficiency upgrades

**Project Scope and Components:** Provide workshops, marketing materials and outreach for Agricultural businesses and provide opportunities of Direct Install and energy upgrades.

**Deliverables:**

- 75% of local agricultural related businesses were contacted either through personal contact, direct mail, Chamber of Commerce outreach, or other types of marketing.
- Ag companies became involved wither directly though the Partnership or through the utility companies.
- The Santa Barbara County Energy Watch Partnership hosted a Pump Efficiency Workshop which was attended by over 30 farmers and representatives.
- The Santa Barbara County Energy Watch Partnership collaborated with the Workforce Resource Center to sponsor a Farm Labor Resource Workshop. The goal of the workshop was to distribute energy efficiency information and resources to the laborers who work in local agriculture.

**Date Initiated:** 01/2014

**Date Completed:** 12/2014

**Original Budget (Cumulative):** \$24,000

**Final Cost (Cumulative):** \$11,671

**Local Match Contribution:** \$0

**Use of Unspent Funds:** Redistributed to other projects

**Project Reimbursed for LG Staff Time (Y/N):** N – Implementer is not LG

| <b>Best Practices</b>  |
|--|
| <ul style="list-style-type: none"><li>• Strategy involved direct mailings, personal outreach, outreach using Chamber resources, workshops and other ways to provided energy efficiency opportunities for Agricultural Businesses.</li><li>• Workshops were presented, including a Pump Efficiency Workshop, and the annual</li></ul> |

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Green Business Energy Efficiency Forum, where agriculture companies received special invitations.

- Agriculture companies have workers that are often hard-to-reach. The Partnership sponsored a Farm Workers Resource Workshop on March 11, 2014, in coordination with the County Workforce Resource Center and provided energy efficiency information for participants.

### Lessons Learned

- Many big agriculture companies, such as coolers, are already involved with utility company representatives.
- Smaller agriculture related companies, such as packaging and distribution, were interested in Partnership programs.
- Farmers are interested in pump information and energy efficiency programs

### Knowledge Transferred

- Agriculture companies are generally difficult to reach but will become involved when it specifically relates to them: such as in the Pump Efficiency Workshop that the Partnership presented.
- This information was discussed at Partnership meetings and conferences.

### Benefit to Local Government

- County of Santa Barbara benefited from agriculture companies helping to reduce greenhouse gas emissions. Also helped to raise continued awareness of sustainability among the Agricultural Community.

### Benefit to the State

- Agriculture companies helped contribute to reduced emissions.

### Accomplishments

- Pump Efficiency Workshop brought in Farmers and agriculture companies
- Agriculture companies participated in the annual Green Business Energy Efficiency Workshop sponsored by the Chamber of Commerce and the Santa Barbara County Energy Watch Partnership
- 75% of local agriculture companies contacted through direct contact, mailers, Chamber

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resources, or connection with agriculture agencies, such as the Shipper-Growers Association.

### Significant Challenges

- Agriculture is considered hard-to-reach
- It takes a consistent effort to involve agricultural companies

### 19.18 Outreach to Smaller Community Areas

**Local Government Partnership:** Santa Barbara County Energy Watch Partnership

**Project Purpose:** Assist the County of Santa Barbara by providing energy efficiency upgrades to the residents and businesses in two hard to reach, low-income communities and provide a workshop for all residents.

**Project Scope and Components:** To assist the County of Santa Barbara in outreach and providing upgrade opportunities, energy efficiency information, and program assistance to the small, outlying community of Sisquoc and the community area of Tanglewood. Sisquoc is an unincorporated area located 13 miles east of Santa Maria. It has a population of 183. Tanglewood, while part of the City of Santa Maria, is in an outlying area away from the rest of the city and west of the airport.

**Deliverables:**

- The Tanglewood Community Outreach Workshop was held in Tanglewood and provided information and resources to all attendees on June 26<sup>th</sup>, 2014. It was a collaborative effort with the County of Santa Barbara, with direct involvement of the County Supervisor. and the Partnership assisted the County in providing energy efficiency information and updates from Fire, Sheriff's Department, Roads, Public Health. The event was hosted by the 3<sup>rd</sup> District Supervisor, Doreen Farr.
- The Sisquoc Community Outreach Workshop was held in Sisquoc and information to all attendees on June 26, 2014. It was a collaborative effort with the County of Santa Barbara, with direct involvement of the County Supervisor. and the Partnership assisted the County in providing energy efficiency information and updates from Fire, Sheriff's Department, Roads, Public Health. The event also provided residents with hands-only CPR training. The workshop was hosted by 5<sup>th</sup> District Supervisor, Steve Lavagnino.
- About 20% of residents participated in each workshop.
- The schools in each area provided the venue for the evening workshops and participated in outreach.
- Energy Efficiency information was mailed to every business and household in Sisquoc and Tanglewood.

**Date Initiated:** 01/2014

**Date Completed:** 12/2014

**Original Budget (Cumulative):** \$45,000

**Final Cost (Cumulative):** \$40,000

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**Local Match Contribution:** \$0

**Use of Unspent Funds:** n/a

**Project Reimbursed for LG Staff Time (Y/N):** N – Implementer is not LG

### Best Practices

- After the success of the Partnership's outreach effort in collaboration with the County of Santa Barbara and its workshop in Casmalia, the LGP used the evening workshop template for two other unincorporated, small communities: Sisquoc and Tanglewood.
- The outreach required collaboration between the Partnership, the utility companies, the County of Santa Barbara, the County Supervisor in each district, County Departments, other organizations, and the schools in Tanglewood and Sisquoc.
- Schools participated in outreach to the families in both areas.

### Lessons Learned

- The Tanglewood Community Energy Efficiency Town Hall meeting was held on June 26, 2014 with exceptional cooperation between agencies and government. Attendees appreciated the well-organized program that featured county updates as well as energy efficiency information. 3<sup>rd</sup> District Supervisor Doreen Farr, hosted the event.
- The Sisquoc/Garey workshop was held on September 30<sup>th</sup>. 5<sup>th</sup> District Supervisor Steve Lavagnino, hosted the event.
- Local residents signed up for more information with Energy programs.

### Knowledge Transferred

- Partnership collaboration with the County and local agencies was reinforced with these events.
- Attendees appreciated the wealth of information provided on energy efficiency and county updates. The Partnership even coordinated hands-only CPR training for the residents of these outlying communities to enhance the attendance for the events.

### Benefit to Local Government

- County of Santa Barbara benefitted by residents and businesses signing up for energy efficiency programs and helping achieve greenhouse gas emission savings.
- County was able to connect directly with these communities in ways they would have never done without the Partnership.
- School system provided energy efficiency information through its classrooms for parents.



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### Benefit to the State

- The State benefitted by having outlying communities participate in helping to achieve Greenhouse Gas savings goals.

### Accomplishments

- Successful outreach to outlying communities
- Energy information distributed to all residents and businesses.
  - The Tanglewood community workshop was attended by approximately 45 residents, service departments from Santa Barbara County, and the District 3 Supervisor
  - The Sisquoc/Garey community workshop was attended by approximately 50 residents, service departments from Santa Barbara County, and the District 5 Supervisor
- Residents signed up for energy efficiency programs.
- Helped to achieve energy savings goals for the Partnership, the County and the State.

### Significant Challenges

- Small, outlying communities are logistically harder to reach and get to.

## **19.19 New Cuyama Outreach, Business and Residential Outreach in Collaboration with the County of Santa Barbara**

**Local Government Partnership:** Santa Barbara County Energy Watch Partnership

**Project Purpose:** To provide energy efficiency outreach, upgrades and information to the school, businesses and residents of this low-income community. To assist the County of Santa Barbara in outreach by providing a workshop in collaboration with the County Supervisor and County Departments.

**Project Scope and Components:** Santa Barbara County Energy Watch Partnership provided Direct-Install energy upgrade opportunities and energy efficiency resources, including providing a workshop for the residents of this low-income community, in collaboration with the County of Santa Barbara and the County's 1st District Supervisor. New Cuyama is 60 miles away from the closest major city (Santa Maria). It is a low income community. The population is approximately 500.

**Deliverables:**

- Community Outreach Workshop was held on April 22<sup>nd</sup> 2015 at the New Cuyama Rec Center. It was a collaborative effort with the County of Santa Barbara, with direct involvement of the County Supervisor. and the Partnership assisted the County in providing energy efficiency information and updates from Fire, Sheriff's Department, Roads, Public Health. The event was hosted by Santa Barbara County 1st District Supervisor, Salud Carbajal.
- Energy Efficiency Information was sent to every business and household in the New Cuyama area.

**Date Initiated:** 01/2015

**Date Completed:** 05/2015

**Original Budget (Cumulative):** \$21,000

**Final Cost (Cumulative):** \$7,606

**Local Match Contribution:** \$0

**Use of Unspent Funds:** Redistributed for other projects

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### Project Reimbursed for LG Staff Time (Y/N): N – Implementer is not LG

#### Best Practices

- Outreach to New Cuyama was a goal based upon its hard-to-reach elements. It is logistically 60 miles for any major city, and it has predominately low income residents.
- Outreach and information distribution was made through direct mailings to all businesses and households. The Partnership coordinated directly with the New Cuyama Post Office.
- Flyers were created and the New Cuyama Recreation Center assisted with getting the word out.
- Exceptional coordination with 1<sup>st</sup> District Santa Barbara County Supervisor Salud Carbajal, who was part of the program as well as County Departments.

#### Lessons Learned

- Collaboration is the key to a successful outreach event.
- The Partnership, PG&E and So Cal Gas made presentations. County departments provided updates, County Fire, Sheriffs, Public Works and the Health Department. EmpowerSBC, American Eco and Staples Energy made presentations and had tables for sign ups.

#### Knowledge Transferred

- This was another successful outreach event that stressed collaboration between groups and Partnership members.

#### Benefit to Local Government

- County of Santa Barbara benefitted by residents and businesses signing up for energy efficiency programs and helping achieve greenhouse gas emission savings.
- County was able to connect directly with these communities in ways they would have never done without the Partnership.

#### Benefit to the State

- The State benefitted by having outlying communities participate in helping to achieve Greenhouse Gas savings goals.

#### Accomplishments

- Successful outreach to outlying communities

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- Energy information distributed to all residents and businesses.
- Residents signed up for energy efficiency programs.
- Helped to achieve energy savings goals for the Partnership, the County and the State

### Significant Challenges

- New Cuyama is a small, outlying community, 60 miles away from Santa Maria. This made it logistically challenging, but worth the effort for outreach.

## **19.20 Los Alamos School, Business and Residential outreach in Collaboration with the County of Santa Barbara**

**Local Government Partnership:** Santa Barbara County Energy Watch Partnership

**Project Purpose:** Provide energy efficiency upgrades to the school, businesses and residents of this low-income community

**Project Scope and Components:** Partnership was to provide Direct-Install energy upgrade opportunities and energy efficiency resources, including assisting the County of Santa Barbara in outreach. This includes a workshop for the residents of this low-income community in collaboration with the County of Santa Barbara and the County's 3rd District Supervisor.

**Deliverables:**

- Unable to coordinate with County Supervisor to provide a workshop and coordinated outreach effort with the County.

**Date Initiated:** 01/2015

**Date Completed:** 12/2015

**Original Budget (Cumulative):** \$10,500

**Final Cost (Cumulative):** \$300

**Local Match Contribution:** \$0

**Use of Unspent Funds:** redistributed to other projects

**Project Reimbursed for LG Staff Time (Y/N):** N – Implementer is not LG

| <b>Best Practices</b>  |
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| <ul style="list-style-type: none"><li>• Time and circumstances limited the accomplishment of this strategic plan item.</li></ul> |



| <b>Lessons Learned</b>  |
|---|
| <ul style="list-style-type: none"><li>• Outreach efforts take time and coordinated effort. Time and circumstances prevented this outreach effort.</li></ul> |

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### Knowledge Transferred

- This strategic plan project was not completed.

### Benefit to Local Government

- None reported

### Benefit to the State

- None reported

### Accomplishments

- None reported

### Significant Challenges

- Time and circumstances limited the accomplishment of this strategic plan item.

### **19.21 Collaboration with City of Buellton and associated regional agencies, such as the Chamber of Commerce, for energy efficiency improvements for City facilities, businesses, and residential**

**Local Government Partnership:** Santa Barbara County Energy Watch Partnership

**Project Purpose:** The purpose was to provide Energy Efficiency upgrades and opportunities for the City of Buellton, its businesses and residents. To assist the City of Buellton in reaching out to its residents and businesses to participate in energy efficiency and sustainability programs. To provide Direct Install upgrades to three municipal facilities.

**Project Scope and Components:** The Partnership coordinated with the City of Buellton for direct install projects and an outreach program. Program was timed to take place for Energy Awareness Month in October of 2015.

The Partnership provided a \$20,000 grant to the City of Buellton for energy efficiency upgrades in three facilities and a community-wide awareness program. The retrofit resulted in \$1,300 in annual savings to the Avenue of the Flags facility; \$1,100 in savings to the Post Office facility; and \$1,200 in annual savings to the community library/city council chambers facility.

The grant also paid for an outreach program by the City of Buellton. It consisted of a community-wide survey which was distributed to 1,600 households and businesses. The survey included a commitment card providing the recipients the opportunity to pledge their conservation effort and sign up for a prize drawing. Two businesses won \$250 credit toward their utility bill. The residential winner received an energy efficient washer and dryer from SGC and PG&E. The winners were awarded at a Buellton City Council meeting in December. The grant also included funds for a website to promote energy efficiency and sustainability.

**Deliverables:**

- Retrofitted three facilities, resulting in \$1,300 in annual savings to the Avenue of the Flags facility; \$1,100 in savings to the Post Office facility; and \$1,200 in annual savings to the community library/city council chambers facility.
- A successful outreach campaign in collaboration with the City of Buellton, which provided a survey to 1,600 households and businesses. It also included the funding of a website to promote sustainability.

**Date Initiated:** 03/2015

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**Date Completed:** 12/2015

**Original Budget (Cumulative):** \$17,500

**Final Cost (Cumulative):** \$21,875

**Local Match Contribution:** \$0

**Use of Unspent Funds:** n/a

**Project Reimbursed for LG Staff Time (Y/N):** Y – LGP provided grants to partner LGs

### Best Practices

- Leveraging local partners: Partnership collaborated with the Buellton Chamber of Commerce and provided funding to assist with outreach.
- Encourage energy efficiency through incentives: Partnership provided a grant to the City of Buellton for Direct Install upgrades, and to assist the City in marketing energy efficiency.

### Lessons Learned

- Collaboration with the City of Buellton and Buellton Chamber of Commerce was successful.
- Time constraints were challenging.
- The Partnership coordinated efforts and assisted where possible to keep the project on time.
- Letting the City determine the effort it wants to take enhanced the buy-in from the City.

### Knowledge Transferred

- Collaboration between organizations and the City of Buellton was enhanced and there should be ongoing promotion of energy efficiency programs through the City of Buellton and the Buellton Chamber of Commerce.

### Benefit to Local Government

- City of Buellton benefitted by Direct Install upgrades by saving \$3,600 in annual energy costs. They also benefitted by a grant which funded an outreach program for over 1,600 households and businesses.



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### Benefit to the State

- The State benefitted by having the City of Buellton, its businesses and residents contribute to advancing the States goal of reducing greenhouse gas.

### Accomplishments

- Two City facilities had Direct Install upgrades.
- The Partnership assisted the City of Buellton in raising awareness and outreach to its residences and businesses.
- The Partnership helped the City to establish a sustainability website.

### Significant Challenges

- Achieving the project in a short timeframe was a challenge. But it was accomplished by collaboration between the Partnership, City of Buellton and the Buellton Chamber of Commerce.

**19.22 Collaboration with City of Solvang and associated regional agencies, such as the Chamber of Commerce, for energy efficiency improvements for City facilities, businesses, and residential.**

**Local Government Partnership:** Santa Barbara County Energy Watch Partnership

**Project Purpose:** Provide Energy Efficiency upgrades and opportunities for the City of Solvang, and assist Solvang in outreach to its businesses and residents.

**Project Scope and Components:** Coordination with the City of Solvang to assist in promoting current energy efficiency efforts, and using collaborative regional resources to provide outreach and resources to businesses and the community.

**Deliverables:**

- Assistance, sponsorship and collaboration in at least one outreach event to provide Partnership information to Businesses in the City of Solvang and the Santa Ynez Valley.
- The Santa Barbara County Energy Watch Partnership became a major sponsor and partner in the city-wide Solvang Community event which was held on May 7<sup>th</sup> at the Veterans Building in Solvang. The Partnership had a table as well as PG&E, So Cal Gas, Staples Energy, and American Eco. The event was put on by the City of Solvang and organized by the Solvang Chamber of Commerce.

**Date Initiated:** 01/2015

**Date Completed:** 12/2015

**Original Budget (Cumulative):** \$17,500

**Final Cost (Cumulative):** \$10,500

**Local Match Contribution:** \$0

**Use of Unspent Funds:** Reallocated to other projects

**Project Reimbursed for LG Staff Time (Y/N):** N – Implementer is not LG

| Best Practices  |
|---|
| • Leveraging local partners: Collaboration with the City of Solvang for energy efficiency |

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programs and outreach

- Leveraging local partners: Collaboration with the Solvang Chamber of Commerce
- Direct outreach to businesses
- The Santa Barbara County Energy Watch Partnership became a major sponsor and partner in the Solvang Community event which was held on May 7<sup>th</sup> at the Veterans Building in Solvang. The Partnership had a table as well as PG&E, So Cal Gas, Staples Energy, and American Eco. The event was put on by the City of Solvang and organized by the Solvang Chamber of Commerce.

### Lessons Learned

- Weather was a factor in the event. Rain kept attendance down.
- The event was a community-wide event, which allowed the Partnership to distribute information to the general public as well as to businesses in attendance.
- Future meetings with the City of Solvang for energy savings upgrades and to assist them in their own energy efficiency programs would be beneficial.

### Knowledge Transferred

- Collaboration with Solvang outreach included the City of Solvang, Solvang Chamber of Commerce, PG&E, So Cal Gas, Staples Energy, and American Eco, and EmpowerSBC.

### Benefit to Local Government

- State benefitted by [Partnership involvement benefitted the City of Solvang and the Santa Ynez Valley by successfully providing outreach to local businesses and the community in regard to Partnership programs, energy efficiency and sustainability.
- The County of Santa Barbara benefitted by outreach to businesses and residents in the Santa Ynez Valley.

### Benefit to the State

- The State of California benefitted by businesses and residents upgrading their homes and buildings with energy upgrades and energy conservation programs. This helped the State to achieve its energy efficiency goals.

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### Accomplishments

- Partnership sponsored and manned 4 tables in a Solvang Community Outreach event on May 7, 2015
- Partnership distributed over 150 packets and Partnership program information to attendees.
- A few businesses in Solvang had Direct Install upgrades and contributed to the success of the Partnership in reaching its savings goals.

### Significant Challenges

- Weather impacted attendance to the event

### **19.23 Collaboration with City of Santa Maria and associated regional agencies, such as the Chamber of Commerce, for energy efficiency improvements for City facilities, businesses, and residential.**

**Local Government Partnership:** Santa Barbara County Energy Watch Partnership

**Project Purpose:** Provide Energy Efficiency upgrades and opportunities for the City of Santa Maria, its businesses and residents. To assist the City of Santa Maria in outreach to businesses and households regarding energy efficiency programs, water conservation and sustainability.

**Project Scope and Components:** Coordination with the City of Santa Maria to assist in promoting current energy efficiency efforts, and using collaborative regional resources to provide outreach and programs.

**Deliverables:**

- Provided Santa Maria Public Works with 50 information bags for home visits by the water conservation specialist. This packet included an LED bulb, PG&E program information, Partnership information, So Cal Gas programs and Energy Efficiency tips. Materials were included in both English and Spanish.
- Coordinated with Santa Maria Television to film a segment at the Sustainability Summit in October. This segment will be used in Partnership promotion and distribution of energy efficiency information. It was also shown on local television.
- Collaborated with local radio for advertising for businesses that also featured the Santa Barbara County Energy Watch Partnership.
- Provided Santa Barbara County Energy Watch Partnership updates to the Santa Maria City Council as part of the Chamber of Commerce Annual Report.
- Prominently featured Santa Barbara County Energy Watch Partnership updates in the Chamber Connection, a monthly feature of the Santa Maria Times with a distribution of over 30,000.
- Met with new Public Works Director to discuss Direct Install opportunities and energy efficiency programs through the Santa Barbara County Energy Watch Partnership.
- Provided Energy Watch Partnership Workshops, and featured energy efficiency programs for local businesses, industry and manufacturers.
- Provided business leads to Staples Energy and PG&E for energy efficiency upgrades.

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**Date Initiated:** 01/2015

**Date Completed:** 12/2015

**Original Budget (Cumulative):** \$14,500

**Final Cost (Cumulative):** \$11,952

**Local Match Contribution:** \$0

**Use of Unspent Funds:** n/a

**Project Reimbursed for LG Staff Time (Y/N):** N – Implementer is not LG

### Best Practices

- Collaboration with City Departments, such as Public Works, for assisting their program outreach for recycling, energy efficiency and sustainability.
- Providing local businesses with Partnership information as well as access to programs like the Santa Barbara Green Business Program to become Green Business Certified.
- Providing City officials with Energy Watch Partnership information.
- Sponsoring events and organizations to extend the reach of energy efficiency and Partnership Participation. The Partnership and Chamber of Commerce were major sponsors for the Santa Barbara County Green Business Program.

### Lessons Learned

- Municipal departments are willing to collaborate to expand their outreach capabilities.
- The City of Santa Maria understands the importance of energy efficiency and sustainability.
- The City of Santa Maria is a good, collaborative partner for energy efficiency programs.

### Knowledge Transferred

- Program successes talked about with other Partnerships at meetings and events.
- Success stories shared between Partners and with other Partnerships.

### Benefit to Local Government

- The City of Santa Maria benefitted from additional resources for their energy efficiency and sustainability outreach efforts.
- The Partnership provided resources for the City to also promote water conservation.

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### Benefit to the State

- The State benefitted by raising awareness of businesses and household for energy efficiency, water conservation, and sustainability.

### Accomplishments

- Partnership provided outreach resources for the City of Santa Maria
- Hundreds of local businesses became engaged in energy efficiency and understanding the need for energy conservation and upgrades.
- The City Council was kept informed of Santa Barbara County Energy Watch Partnership's efforts through periodic meetings and annual reports.

### Significant Challenges

- Providing some information in English and Spanish required a translation.
- Coordination was good- No significant challenges.

### 19.24 Water-Energy Nexus

**Local Government Partnership:** Sonoma County Energy Watch

**Project Purpose:** Energy savings via water efficiency projects

**Project Scope and Components:** Implement water efficiency retrofits to capture both water and energy savings.

**Deliverables:**

- 100,000 kWh saved via water efficiency projects

**Date Initiated:** 1/1/2013

**Date Completed:** Project discontinued on or before 12/31/2014

**Original Budget (Cumulative):** \$20,000

**Final Cost (Cumulative):** \$3,800

**Local Match Contribution:** Unknown

**Use of Unspent Funds:** Unspent funds redistributed to other SER projects  
(Note: Large portions of the LGP's SER funds went unspent in 2013, 2014, and 2015.)

**Project Reimbursed for LG Staff Time (Y/N):** Y – LGP Implementer staff time.

#### Best Practices

- Explore innovative approaches to quantify energy savings and GHG reduction from water savings
- Engage local partners and stakeholders in planning a pilot program
- Evaluate pilot program to determine how to scale, if successful

#### Lessons Learned

- Sample projects were not all replicable
- Opportunities for both water and energy savings from a single measure were more limited than expected
- Regional sustainability efforts may already offset GHG emissions from the water delivery sector



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### Knowledge Transferred

- LGP engaged the City of Santa Rosa and two large customers in planning efforts

### Benefit to Local Government

- Attempt to identify replicable, scalable strategy to reduce unnecessary water and energy consumption

### Benefit to the State

- During the historic drought, efforts to reduce unnecessary water and energy consumption are a priority

### Accomplishments

- Participated in 2 face to face meetings (one at the LGP's SCEW team mtg.) and one at PG&E, plus 2 phone calls.
- Developed a project scope to include motivating and incentivizing the Sonoma County Fairgrounds to do a comprehensive water conservation retrofit and Kendall Jackson to do a barrel washing program whereby the water would be reused up to 10 times.
- Met with City of Santa Rosa and PG&E to discuss an industrial kitchen program. The City is working on a project for Amy's Kitchen. The water audit (via a consultant) will be complete in April.
- Explored the opportunity to provide consulting and assistance for the largest water/energy saving measures and hope that those measures can be replicated by other large food producers in Sonoma County and the PG&E territory. The Food Service Technology Center will be auditing three detention facilities.
- Continued to investigate working with Amy's Kitchen on a combined water/energy nexus project. Unfortunately, the projects that would be of most value to Amy's Kitchen do not appear to be replicable beyond their specific production facility.
- Investigated a water conservation/catchment/re-use project at the Permit and Resource Management Department (PRMD) building that could be a model for local contractors. Unfortunately, the energy savings with such a project are not enough to justify moving forward.

### Significant Challenges

- This project was begun by a staff member who has since left the program, so historic information about this effort is difficult to collect and replicate.
- Initial projects that were identified turned out to either have large energy savings or large water savings, but not both. In either case, some of the projects moved forward based

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upon single dimension (energy or water) savings, but did not qualify for inclusion on this effort.

- Projects identified by Amy's Kitchen turned out to not be widely replicable beyond their specific production facility.
- Observed difficulty to (hopefully) incorporate rainwater catchment and/or greywater capture into overall project design at PRMD.
- Finally, shortly before a decision was made to discontinue this project and dedicate the LGP's efforts elsewhere, the question was raised how to calculate GHG savings for water-energy nexus projects given that Sonoma County Water Energy is already using 100% renewable power for water conveyance through their "carbon free water" program. Although this was not the final reason to change course, it was illustrative that the LGP's SER efforts were best spent on other more directly-beneficial projects.

### 19.25 Mini-Retro Commissioning

**Local Government Partnership:** Sonoma County Energy Watch

**Project Purpose:** Energy savings via mini-retro commissioning projects

**Project Scope and Components:** Implement a program to allow for building analysis and fine tuning of mechanical systems for building stock not meeting the current 100,000 square foot threshold.

**Deliverables:**

- 3 completed projects with associated kWh savings

**Date Initiated:** 1/1/2013

**Date Completed:** Project discontinued on or before 12/31/2014

**Original Budget (Cumulative):** \$80,000

**Final Cost (Cumulative):** \$19,710

**Local Match Contribution:** Unknown

**Use of Unspent Funds:** Unspent funds redistributed to other SER projects  
(Note: Large portions of the LGP's SER funds went unspent in 2013, 2014, and 2015.)

**Project Reimbursed for LG Staff Time (Y/N):** Y – LGP Implementer staff time.

#### Best Practices

- Use of data and analysis to target and prioritize energy efficiency opportunities
- A cross-functional team of LG staff was assembled

#### Lessons Learned

- The opportunities for doing mini-RCx projects turned out to be much fewer than originally anticipated

#### Knowledge Transferred

- Sonoma County staff were provided training on analytic-based retro-commissioning

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### Benefit to Local Government

- Assessment of energy usage through RCx, similar to benchmarking, provides LGs information to prioritize energy efficiency projects

### Benefit to the State

- Local governments lead by example in developing innovative energy efficiency strategies

### Accomplishments

- County worked with Nexant to evaluate and identify RCx opportunities at Main Adult Detention Facility (MADF), the main jail located at the County Administration Center.
- Completed an RCx analysis of the Main Adult Detention Facility (MADF) in June.
- Nexant provided a training for LG staff in March on main jail RCx so County could make operational changes.
- LGP met with PG&E and ClearResult to look at their Analytics RCx program.
- Facilities Division completed the work to correct problems with the variable frequency drives on the air handling units, as well as to make changes to the control sequence programming.
- Nexant held a final audit review/training for County staff in October.

### Significant Challenges

- This project was begun by a staff member who has since left the program, so historic information about this effort is difficult to collect and replicate.
- The opportunities for doing mini-RCx projects turned out to be much fewer than originally anticipated.
- Analytics Enabled RCx continues to be of interest to SCEW and the LGP will continue to evaluate how this service could be better integrated into the LGP's service catalog through referrals to other third-party programs.

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### 19.26 Mini-Grant

**Local Government Partnership:** Valley Innovative Energy Watch (VIEW)

**Project Purpose:** Complete municipal infrastructure updates in return for municipal-led community outreach event supporting energy efficiency (EE) awareness.

**Project Scope and Components:** Establish “mini-grant” program that provides funds to one municipality to complete municipal infrastructure updates in return for municipal led community outreach event to support energy efficiency awareness. Local government and community build community through “learn by doing” approach.

**Deliverables:**

- At least one municipal EE retrofit completed and one community outreach event held.

**Date Initiated:** 09/2015

**Date Completed:** By 12/2016

**Original Budget (Cumulative):** \$15,000

**Final Cost (Cumulative):** N/A; project in progress

**Local Match Contribution:** Undetermined. To date match has been in uncategorized local government staff time.

**Use of Unspent Funds:** None.

**Project Reimbursed for LG Staff Time (Y/N):** N

#### Best Practices

- Utilize a team approach of IOU Government Relations team and Partnership team to approach municipal staff.
- Involve EE contractors and ensure contractors and city staff have strong communication
- Set clear EM&V expectations of community outreach event(s)

#### Lessons Learned

- One point of contact at the LG can drag the process out. In this case a well-meaning, but over committed City Manager cannot ride herd on the initiative. The LGP would have been better served to ask the City Manager for specific points of

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contact within the City, or to state in the offer that specific staff contacts were required.

### Knowledge Transferred

- VIEW has extensive experience conducting successful community outreach events.
- City staff can share their experiences with contractors and the retrofit process with the community.

### Benefit to Local Government

- The City of Avenal receives an EE municipal retrofit, or co-pay towards a Direct Install municipal offering.
- The City of Avenal engages with their community over EE tips and the benefits of adopting EE measures. As a result, municipal staff and citizens gain knowledge and experience in EE.

### Benefit to the State

- The State requires low income residents to receive cost-effective EE measures available to them. The community outreach events will help engage the local low income community to learn about these measures and take advantage of them.

### Accomplishments

- TBD
- The City of Avenal has accepted challenge

### Significant Challenges

- TBD

### 19.27 Municipal Energy Tune-Up (METU)

**Local Government Partnership:** Valley Innovative Energy Watch (VIEW)

**Project Purpose:** Build energy efficiency capacity in rural local governments.

**Project Scope and Components:** Engage municipal staff at project level to increase understanding of energy efficiency and drive deeper and greater energy savings.

**Deliverables:**

- Number of municipalities engaged
- Number of accounts benchmarked in ENERGY STAR Portfolio Manager (ESPM)
- Number of Readiness Reports created
- Number of kWh, kW and therm saved

**Date Initiated:** 06/2014

**Date Completed:** ongoing

**Original Budget (Cumulative):** \$247,850

**Final Cost (Cumulative):** N/A; project in progress

**Local Match Contribution:** Undetermined. To date match has been in uncategorized local government staff time.

**Use of Unspent Funds:** None.

**Project Reimbursed for LG Staff Time (Y/N):** N – Implementer is not LG

| Best Practices   |
|--|
| <ul style="list-style-type: none"><li>• Take a team approach with PG&amp;E Energy Service group to ensure LG has complete understanding of offering and the role each party plays.</li><li>• Leveraging success of regional EECBG (2010-12) effort to build relationships.</li><li>• Have specific points of engagement to build LG ownership of project and build understanding.</li><li>• Track all savings, even those attributed to third party programs, to show interconnectedness of EE opportunities.</li><li>• Use data analytics to make project opportunity assumptions and ensure LG buy-in before</li></ul> |

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the expense of an audit.

### Lessons Learned

- Can only begin benchmarking when all information has been provided; trying to complete the effort on a piecemeal basis is onerous.
- Differentiate METU program from services provided by private ESCOs
- Ensure utility rep has a complete understanding of METU and is willing to utilize METU as a resource to help them achieve savings
- There was an initial glut of project identified (approximately 1.5m kWh) that needed to be immediately referred into third party programs for greater savings and incentives to LG. Getting participating LGs to a point to look at project planning, not immediate needs, took nearly 18 months.
- When rolling out a capacity building and project aggregation program such as this, it was easier when the funding source, i.e. the EECBG grants was the common factor. LGs understood that. When it's housed within an IOU offering time must be taken to educate on the funding source (Public Goods Charge), how it's different from a third party program, ESCO, etc. This was an added layer of education that the LGP did not anticipate but now knows how to navigate.
- LGs are stuck in an immediate range of vision and are motivated to look at quick savings, usually those that can be referred into a third party program. Getting them to participate in a long term project pipelining effort takes a more intense, hands on effort.
- Paying to have staff trained on Level I audits is far more cost effective than hiring out to contractors or engineering firms. Knowing what IOU audit services are available is essential, i.e. large integrated audit program. Due diligence lead to project funds set aside for audits can be redirected to LG education and project management.

### Knowledge Transferred

- Municipalities, stakeholders and VIEW all work together to increase understanding of a municipality's energy use management, capacity for EE projects and dedication to an energy efficient future.

### Benefit to Local Government

- Local governments "learn by doing" the benefits of EE and how to achieve greater energy and cost savings.

### Benefit to the State

- Local governments become energy leaders by using EE to reduce energy use in their



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facilities and throughout the community, as required by the State.

### Accomplishments

- 2,623 PG&E service accounts cleaned up
- 2,356 PG&E accounts uploaded into ESPM and registered with Automated Benchmarking Services (ABS)
- 22 referrals made to third party programs
- 278,105 kWh completed and 1,000,000 kWh pending

### Significant Challenges

- Coordinating efforts between municipality and utility representative
- Explaining the loading order of IDSM and why on-site generation reduces amount of utility incentives
- Lack of access to majority of municipal accounts in Energy Insight requires going through a slow process of gathering data
- Reporting updates and successes (kWh and kW savings) from third party program referrals requires effort on Account Representative (CRM) to provide data
- Wells consume a majority of energy for municipalities, but many, if not most, go through the APEP program. Being able to acquire a list of wells tested, and when, would improve efforts