Best Practices/Lessons Learned from Strategic Plan

2010-2012 Final Report Version

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April 2016

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1. Introduction

Since 2010, Southern California Edison has been working with local governments toward achieving the goals laid out in the California Long-term Energy Efficiency Strategic Plan. This work was directed through three solicitations for work. The following document highlights some of the best practices and lessons learned from the strategic solicitation. These were pulled from "Best Practices/Lessons Learned" deliverables and the "Best Practices/Lessons Learned" section of the "Final Report". This document is organized by strategic plan task to assist any future work more easily utilize prior experiences. This document will be updated as tasks are completed and as more lessons learned/best practices become available.

1.1 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.09-09-047 required SCE to execute a competitive solicitation process for city, county, and regional governments to pilot innovative local government ("LGs") strategic plan strategies. D.09-09-047 also directed the IOUs to develop a strategic plan menu of tasks for local governments to select from for Strategic Plan work. SCE and other IOUs worked with the Energy Division and local governments to develop this menu of tasks, which was used as the basis for SCE's solicitation.

1.1.1 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."

2. Strategic Plan Goal 1: Reach Codes

"Local governments lead adoption and implementation of "reach codes stronger than Title 24 on both mandatory and voluntary bases"

2.1 Strategic Plan Task 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.

2.1.1 City of Delano – Phase 1

Local Government Partnership: Kern County Partnership

Project Title: Adopt Green Building Energy Codes Greater than Title 24 to reduce energy use and greenhouse gas emissions for both new construction and development; and existing structures.

Project Purpose: The goal of this task was to develop and adopt, as feasible, a green building policy and building energy code that exceeds the 2008 Title 24 Building Energy Efficiency Standards by 15% for new residential and commercial construction, along with a mix of voluntary measures, informed by a stakeholder engagement process. The green ordinance would provide a mechanism for accelerating market adoption and comfort with the 2014 update to the Title 24 energy code.

Project Scope and Components: Develop and adopt a green building code or standard for residential projects that is based on Build It Green program and a LEED-based code or standard LEED rating for commercial projects. Each code or standard shall include energy efficiency requirements that exceed current Title 24.

> **Deliverables:**

1. Report on status of consultant or Subcontractor to support Task 2A.
2. Reach Code Assessment and Planning Report
3. Draft Code and Ordinance Amendment
4. Report on Stakeholder Input
5. Final Code and Ordinance Amendment
6. Submit Code and Ordinance Amendment to City Council for adoption

7. Submit Code to CEC for Approval Under Section 10-106

Date Approved (Advice Letter (NTP)): March 2011 (August 2011)

Date Completed (est.): July 2012   **Date Completed (actual):** August 2012

Estimated Cost: $119,050   **Final Program Cost:** $324,549 ($379,500 Budget)

Local Match Contribution: $0

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

Program Budget Unspent: $133,951

Best Practices
• None.

Lessons Learned
• The public accepts sustainability as a concept as long as it doesn't take much effort from the individual. A corollary is that everyone feels that energy efficiency is the correct direction to go in, but no one wants to be mandated to do this.
• Much of the public feels that government should solve our problems and take care of the community.
• Economics is the thread of resistance encountered among many of the Implementer's audiences.
• "Green Building" has been used excessively as a sales gimmick, raising question about the intentions of what is being sought.

Knowledge Transferred
• This document serves as the primary mechanism of conveying best practices and lessons learned from this task. However, the implementer is available to discuss this further with any interested parties.

Next Steps
• Following the non-adoption of green building ordinance, strategies were included in the CAP to promote Commercial and Residential Green Building, and to provide

education to the residential and commercial sectors on energy efficiency.

Benefit to the State

- The State will benefit from this task because a green building energy code will increase the energy efficiency of the community resulting in reduced energy use and GHG emissions.

Benefit to Local Government

- Even though the City did not pass the Green Building Ordinance, the city was able to adopt a draft of the Green Building Ordinance and determine political climate of such an ordinance. Future endeavors will use this result to inform future policy proposals.

Successes

- Developed draft Green Building Ordinance (GBO) and presented it to Planning Commission for review and City Council for adoption, along with summary of benefits and estimates of financial impacts to the Implementer and the community.
  - o Ordinance not adopted due to lack of support on City Council, and resistance from many in community;

Challenges

- Garnering support from the public and from elected officials
  - o Lack of widespread support prevented adoption of ordinance
  - o It was known that this would be a challenge, given the state of the local economy and the cultural resistance to government; despite a well-constructed ordinance supported by compelling cost-benefit analyses, overcoming resistance to mandated energy efficiency measures is a challenge that appears to be insurmountable at this time in the City.
- The perception that sustainability and/or energy efficiency are worthwhile to pursue, but the public shouldn't be inconvenienced or be required to pay additional.
- Ordinance not adopted due to lack of support on City Council, and resistance from many in community;

2.1.2   City of Moreno Valley – Phase 1

Local Government Partnership: Community Energy Partnership

Project Title: Prepare EE Ordinance and Code Options for City Council and Supporting Council Objectives

Project Purpose: Provide City Council with options for energy efficiency ordinances and/or codes. These options will target efficiencies and conservation in electricity in homes and non-residential buildings to reduce GHG emissions.

Project Scope and Components: For this task, Implementer efforts will be focused on two activities:

1. Preparing a comprehensive analysis of municipal energy efficiency ordinance options available; and
2. Taking the initial steps in the implementation of two ordinance options selected by working with relevant stakeholders to assure coordinated communications and fulfillment.

   Deliverables:
1. Report on Status of Implementer or Subcontractor to Support the Task
2. Energy Efficiency Reach Code Assessment and Planning Report
3. Draft Energy Efficiency Code and Ordinance Amendment
4. Final Code and Ordinance Amendment

Date Approved (Advice Letter (NTP)): March 2011 (April 2011)

Date Completed (est.): April 2012   **Date Completed (actual):** August 2012

Estimated Cost: $84,087   **Final Program Cost:** $365,379 ($375,513 Budget)

Local Match Contribution: $0

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

Program Budget Unspent: $10,134

<div style="background:black;color:white;text-align:center;">**Best Practices**</div>

- Consideration of local municipalities with similar climate zones, and/or demographics.

- Compared approaches to implementing CALGreen and green ordinances used by other cities (Simi Valley, West Sacramento, and Chula Vista).

- A thorough evaluation of the California Green Building Code mandatory and optional measures.

- Reviewed Cost Effectiveness Studies that have been recognized by the California Energy Commission.

- Consider economic climate: Elected officials are sensitive to economic impact on constituents.

- Engage, decision makers, stakeholders and internal staff early in the process

Lessons Learned

- The City Council was supportive of saving money through energy efficiency, and also supportive of green policies that would not impact the Implementer's budget or have the potential to impact development.

- The Implementer's decision-makers were not supportive of reach codes due to the additional cost burden to development and the potential impact on economic growth

Knowledge Transferred

- Shared with neighboring cities and Western Riverside Council of Governments in a workshop held in September 2013.

Next Steps

- No next steps are proposed at this time. Title 24 keeps being updated with more energy efficiency measures and Implementer did not feel that we needed to add to those measures.

Benefit to the State

- The Implementer researched Title 24 and Reach Codes. From this the Implementer has a greater understanding, and Staff is better educated on Title 24, Reach Codes, and energy efficiency.

Benefit to Local Government

- The process of pursuing reach codes raised awareness of the Title 24 and CALGreen

policies among several departments.

Successes
• Staff discussed this reach code with the Planning Commission and City Council.
• The Planning Commission recommended approval of adopting a portion of the reach code: parking requirement for fuel efficient, carpool.

Challenges
• The major obstacle for the reach code effort was the concern of the development community.
• The Reach Code, including local mandatory measures and performance standards for residential and nonresidential was not recommended by the Planning Commission to go to City Council in July 2012. No further action to gain adoption was taken by the Implementer.
o The primary reason was the upcoming new State Building Code, which was increasing the energy efficiency requirements by at least 20%.
o The item did not have support from the development community.
o There was concern with impacts to future development, since no other cities within the immediate area or Riverside County have adopted reach codes

2.1.3   Orange County Cities – Phase 1

Local Government Partnership: Orange County Cities Partnership

Project Title: Develop Model Comprehensive Local Government Facilities Policies and Programs

Project Purpose: Implementer will develop energy efficiency sustainability policies for presentation to the city councils of Participating Municipalities for their consideration for adoption by the municipalities. Developing smart, state of the art capital project, energy and maintenance policies will help in reducing the lost opportunities for increasing energy efficiency.

Project Scope and Components: .Implementer will develop model energy policies for Participating Municipalities (PM) that for capital improvement projects for municipal facilities. The model energy policies will address the following areas:

1. Building commissioning

2. Green Building standards

3. Minimum reach codes and standards

4. Equipment/product specifications to assist PM procurement staff in the selection of energy efficiency equipment

5. Plans for re-investing energy efficiency savings into each PM's budget for future energy efficiency activities

6. Service level agreements between departments

7. Operations and maintenance protocols and software

Deliverables:

1. Develop, issue, and award RFP for professional services for "reach" code policy development; report on status of consultant or Subcontractor to support the task

2. Submit Reach Code Assessment and Planning Report to SCE for review and comment

3. Develop draft model comprehensive local government code and ordinance amendments for Participating Municipalities for SCE review and comment using information from Utility Manager/EEMIS Task 2.

4. Submit final model comprehensive local government code and ordinance amendments/policies for Participating Municipalities for SCE review and comment

5. Submit draft model energy, maintenance and service level policies covering facilities under management control for SCE review and comment

6. Deliver final model energy, maintenance and service level policies covering facilities under management control for SCE review and comment

7. Customize policies for a minimum of four (4) Participating Municipalities' member city's needs for presentation to city council and/or city executives for consideration to adopt comprehensive energy policies for local government facilities

8. Present customized policies to city councils and other city executives; provide effective date of new codes and ordinance/policies, or reasons for rejection and alternative plans.

9. Submit code to CEC for approval under Section 10-106

Date Approved (Advice Letter (NTP)): March 2011 (September 2011)

Date Completed (est.): September 2012   **Date Completed (actual):** 2012

Estimated Cost: $80,000   **Final Program Cost:** $0

Local Match Contribution: $0

Project Reimbursed for LG Staff Time: Y / N

Program Budget Unspent: $80,000

Best Practices
• None. Implementer cancelled this task due to unfavorable conditions within the Local Governments for Reach codes.

Lessons Learned

• Understand the local conditions and determine if they are conducive to the adoption of a reach code. Factors may include:
  ○ Political climate and composition of decision makers.
  ○ Position of the building community.
  ○ Economic climate, e.g., is building activity robust or moribund, state of employment in the city.
  ○ Would the code be directed towards new construction, renovation, residential, commercial?

Knowledge Transferred
• None. Implementer cancelled this task due to unfavorable conditions within the Local Governments for Reach codes.

Next Steps
• The City of Huntington Beach is developing a customized Climate Action Plan with energy efficiency language as part of 2013-2015 Strategic Plan funding.

Benefit to the State
• None. Implementer cancelled this task due to unfavorable conditions within the Local Governments for Reach codes.

Benefit to Local Government
• None. Implementer cancelled this task due to unfavorable conditions within the Local Governments for Reach codes.

Successes
• None. Implementer cancelled this task due to unfavorable conditions within the Local Governments for Reach codes.

Challenges
• Implementer cancelled this task due to unfavorable conditions within the Local Governments for Reach codes.

2.1.4 County of Santa Barbara – Phase 1

Local Government Partnership: South Santa Barbara County Energy Leader Partnership

Project Title: Adopt Green Building Energy Codes Greater than Title 24 Requirements

Project Purpose: Adopt building energy codes more stringent than Title 24's requirements for new construction and additions/or alterations to existing buildings on a voluntary basis, using cost-effectiveness studies by Climate Zone done by the utilities; implement two or three additional voluntary tiers of increasing stringency through the *Innovative Building Review Program* (IBRP).

Project Scope and Components: Adopt building energy codes more stringent than Title 24's requirements for new construction and additions/or alterations to existing buildings on a voluntary basis, using cost-effectiveness studies by Climate Zone done by the utilities; implement two or three additional voluntary tiers of increasing stringency through the IBRP.

  Deliverables:

1. Report on Status of Consultant or Subcontractor to Support the Task;

2. Reach Code Assessment and Planning Report – Implementer shall include review of the Cost Effectiveness Study for relevant climate zones and assess sufficiency for code development, assessment of existing reach codes and resources, and plan for developing voluntary reach codes based on the information gained from the assessment. This may be in the format of a memo report or full report;

3. Draft Policy Amendment Resolution;

4. Report on Stakeholder Input - Implementer shall include list of all stakeholder meetings, workshops, etc.; list of all attendees and contact info by workshop; and discussion on how input was used in refining the policy. Implementer may also include community stakeholder meetings;

5. Final Policy Amendment Resolution;

6. Submit Policy Amendment Resolution to Board of Supervisors for adoption - If policy is adopted, Implementer shall submit date on which the policy becomes effective. If policy is rejected, Implementer shall submit memo report on reasons for rejection and alternate plans;

7. Submit Code to CEC for Approval; and

8. Monthly reports of tracked Performance Indicators

Date Approved (Advice Letter (NTP)): March 2011 (June 2011)

Date Completed (est.): Dec 2011   **Date Completed (actual):** June 2014

Estimated Cost: $18,860   **Final Program Cost:** $283,555 ($283,048 Budget)

Local Match Contribution: $0

Project Reimbursed for LG Staff Time: Ⓨ / N

Program Budget Unspent: $0

Best Practices
• A voluntary reach code can help to ease some stakeholder concern, while still achieving the desired goal of GHG reduction and increased EE savings.
• Understanding the position of the Board before engaging in the development of the reach code, helped to ensure that the reach code was a desired end goal before engaging in a lengthy development/vetting process.
• The development of an Assessment and Planning Report helped to flesh out some key details that helped shape the way that the reach code was developed, presented and vetted.
• Presentations to key stakeholder groups when they usually meet helped to provide a variety of input, as opposed to holding an open-to-the public stakeholder vetting process whereby only those with a strong opinion are present.

Lessons Learned
• The original plan was to develop a mandatory reach code. However, pushback from key stakeholders led to the pursuit of a voluntary reach code.
• The checklist for the mandatory reach code was reconfigured into a checklist more appropriate for voluntary actions. The checklist was also amended to incorporate

updates to CALGreen and Title 24.

Knowledge Transferred

- The Implementer has done extensive work to share their experiences, lessons learned and best practices with other communities groups and local governments, including presenting at, and recently becoming a member of, the Local Government Sustainable Energy Coalition (LGSEC), attending and presenting at meetings with the State Wide Energy Efficiency Collaborative (SEEC).

Next Steps

- The Implementer continued to pursue Strategic Plan in solicitations 2 and 3. They have/are completing the following tasks.

    o Phase 2

        ▪ Task 3.1.1: Develop Energy Benchmarking Policy

        ▪ Task 3.1.2: Develop Utility Manager System

        ▪ Task 3.2.1: Develop Energy Action Plan

        ▪ Task 3.2.4: Develop Commissioning/Retro-commissioning Policy

    o Phase 3

        ▪ Task 1.1.2: Develop EE Standard for Implementer Facilities

Benefit to the State

- The Implementer adopted a voluntary two-tiered building energy code more stringent than Title 24 requirements for all new and existing municipal, commercial, and residential developments resulting in decreased GHG emissions.

Benefit to Local Government

- The Implementer adopted a voluntary two-tiered building energy code more stringent than Title 24 requirements for all new and existing municipal, commercial, and residential developments. They also adopted Resolution 14-164 amending Policy 2.1, Policy 2.4, and Policy 6.1 of the Implementer's Comprehensive Plan Energy Element to incorporate updates to the voluntary reach code and replacing specific policy standards with a general reference, eliminating the need to amend the Comprehensive Plan each time Title 24 is updated.

Successes
• The Implementer received positive feedback from the community which made it easier for the Implementer to adopt a voluntary reach code. Input from the community helped to shape a code that was amenable to all stakeholders. • The Implementer passed legislation to amend existing language within the Implementer's Comprehensive Plan's Energy Element to update the Implementer's voluntary green building program. These updates amended the voluntary program (previously the "Innovative Building Review Program", and re-branded as "Smart Build Santa Barbara") with two energy efficient tiers to be more stringent than Title 24 and encouraged applicants to exceed these standards. • This voluntary program was submitted to the CEC for approval under Section 10-106 and approved.

Challenges

• There was little internal support for a mandatory Reach Code.
 	
    o The checklist for the mandatory reach code was reconfigured into a checklist more appropriate for voluntary actions. The checklist was also amended to incorporate updates to CALGreen and Title 24.
 	
    o Instead of developing a mandatory reach code, the green building program was amended to include two voluntary tiers that require developments to be 30% and 40% above Title 24 requirements.

2.1.5   County of Ventura – Phase 1

Local Government Partnership: Ventura County Partnership

Project Title: Develop and Adopt Energy Efficiency Building Policies More Stringent than Title 24

Project Purpose: Develop a policy requiring LEED and Energy Star or other standard rating for Implementer owned, leased, operated or rented facilities; present for consideration and adopted by the Chief Executive Office and amended to the Implementer's Administrative manual. This policy will increase the number of energy efficiency improvements in County buildings which in turn would decrease the Implementer's energy costs and usage.

Project Scope and Components: Implementer will focus on increasing the installation of energy-efficient equipment above Title 24 for facilities under its control. Implementer will prepare a policy for consideration by the Board of Supervisors for adoption of a policy that

requires LEED, Energy Star® ratings, or another program standard for County owned, leased, operated, or rented facility.

Deliverables:

1. Report on Status of hiring Consultant or Subcontractor to Support the Task

2. Assessment and Planning Report for the Development of energy efficiency building policies for county facilities

3. Draft Policy for county facilities to the Board of Supervisors Subcommittee(s) for a recommendation to the Board of Supervisors

4. Proposed Final Policy completed

5. Policy submitted to Board of Supervisors for adoption; if adopted, provide written policy and evidence the policy was adopted by the local government; effective date of plan; if rejected, reasons for rejection and alternative plans.

6. Implement program standard for county facilities

7. Monthly reports of tracked Performance Indicators

Date Approved (Advice Letter (NTP)): March 2011 (May 2011)

Date Completed (est.): Aug 2012 **Date Completed (actual):** Nov 2012

Estimated Cost: $25,000 **Final Program Cost:** $1,001,068 ($1,000,000 Budget)

Local Match Contribution: $0

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

Program Budget Unspent: $0

Best Practices
• By enrolling its buildings in Portfolio Manager, it can monitor the impact of policy through the Energy Start Performance Rating:
o For facility alterations, Departments will be able to compare the ENERGY STAR Energy Performance Rating of the building
o For new construction, the Department will be able to compare the ENERGY STAR Energy Performance Rating of the building after two years of operation.

Lessons Learned

- For this task The General Services Agency created a team that reviewed the reach codes and cost effectiveness studies. These included County staff and local subject matter experts. The team evaluated the cost effectiveness studies for Climate Zones 6, 9 and 16.

Knowledge Transferred

- All staff involved will know code polices.

Next Steps

- Continue to update policy

Benefit to the State

- Implementer will be up to date on all reach codes and future changes will ease implementation.

Benefit to Local Government

- The policy will improve efficiency in new construction and alteration for County owned and leased facilities.

- All new construction and/or renovations will reflect the standards set forth in the policy and exceed Title 24 requirements by 15%, including the construction of the Replacement Wing of the Medical Center.

- The energy intensity of buildings in which alterations are implemented will be reduced as well as ensure the energy intensity of new construction is at the limits of available technologies, resulting in an overall improvement in efficiency of the County's portfolio of facilities.

Successes

- Developed and adopted a building policy that sets minimum energy efficiency requirements for new construction, alterations, and additions to owed or leased space performed by the Implementer.

Challenges

- With the State constantly updating energy codes a reach code is difficult to develop

> and implement. By the time the reach code is approved it becomes obsolete. This is an ongoing obstacle, as Title 24 is updated every three years.

2.2   Strategic Plan Task 1.1.2 - Green Building Codes

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

2.2.1   City of Beaumont – Phase 1

Local Government Partnership: Beaumont Partnership

Project Title: Adopt Green Building Policy for Municipal Facilities

Project Purpose: Adopt a municipal green building ordinance policy for municipal, commercial, and/or residential development. By developing and implementing this municipal green building ordinance, the Implementer has the goal of not only transforming the mindsets of other local public agencies, but also to encourage private industry to take green building seriously and demonstrate the economic and environmental benefits of "building green."

Project Scope and Components: Implementer will address the CEESP goal of reaching codes higher than Title 24 on both a mandatory and a voluntary basis. Through implementing the Program, the Implementer plans to transform the mindsets of other local public agencies with the city and encourage private industry to embrace economic and environmental benefits of green building.

Deliverables:

1. Green Building Policy Assessment and Planning Report
2. Draft Green Building Policy
3. Report on Stakeholder Input: Green Building Policy
4. Final Green Building Policy
5. Submit Green Building Policy/Program to City Council for adoption
6. Monthly reports of tracked Performance Indicators

Date Approved (Advice Letter (NTP)): March 2011 (September 2011)

Best Practices/Lessons Learned from Strategic Plan (Draft)

2010-2012 Final Report

Date Completed (est.): January 2012   **Date Completed (actual):** December 2011

Estimated Cost: $15,000   **Final Program Cost:** $81,452 ($110,000 Budget)

Local Match Contribution: $0

Project Reimbursed for LG Staff Time: Ⓨ / N

Program Budget Unspent: $28,548

Best Practices
• The Implementer believes that education should always be the first step. Unfortunately, in this process, we began with asking the City Council to adopt a policy without doing the necessary education upfront. After the City Council had adopted the Municipal Green Building Policy, we were able to schedule training with SCE's Codes and Standards staff. The timing was off for this presentation since Council had just taken action on the Municipal Green Building Policy in the previous meeting. In hindsight, the Implementer should have undertaken SP Task 1.1.6 ("Develop Educational Program for Elected Officials & Staff") first, and then completed this task (SP Task 1.1.2).

Lessons Learned
• Knowledge is power. The more that Implementer's officials (elected or employed) understand about the context of Green Building and the effectiveness of Green Building measures (in saving money and in mitigating environmental impacts) the more willing they are to accept these higher standards.
• The Building Industry Association (BIA) is against any and all reach codes. They came to our meeting even knowing that the policy we were considering would only pertain to Implementer's facilities. There needs to be some reaching out and education to the BIA as to how Green Building can also be a positive for their business.

Knowledge Transferred
• There should be more available and frequent educations on energy efficiency benefit for BIA, otherwise cities will run into constant push back from BIA and won't be able to pass these type of policies or ordinances.

Next Steps
• The City/Implementer will continue to adopt the Mandatory Green Building Policy for community.

- The Implementer completed a community Climate Action Plan (EE-CAP) in the 2013-2014 LGP Strategic Plan Pilot Program that incorporates the results of this task.

Benefit to the State

- The State will benefit from this green building policy through reduced energy use and reduced GHG emissions. .

Benefit to Local Government

- The Municipal Green Building policy will hold Implementer's facilities to an energy efficiency standard higher than current Title 24 standards.

- Through implementation of the Municipal Green Building policy, the Implementer plans to track existing energy usage of Implementer's facilities, and the measure the reduction in energy use realized by implementing the policy, with a goal of retrofitting 100% of the Implementer's facilities by 2014. Reductions in energy consumption and cost will be reported to the City Council on an annual basis.

Successes

- As a result of the newly adopted Municipal Facility Green Building Policy, the Implementer is working with Southern California Edison (SCE) to implement LEED-based green building standards for Implementer's future building projects, including the expansion of the Implementer's wastewater treatment facility

Challenges

- Getting buy-in from all of Implementer's departments, including Public Works and Building and Safety was a challenge. The challenge was mitigated by making the Municipal Green Building guidelines into a policy rather than an ordinance. The obstacles were overcome by allowing Staff to feel as though they had flexibility with the final product (policy vs. ordinance)

2.2.2   Coachella Valley Association of Governments – Phase 1

Local Government Partnership: Desert Cities Partnership

Participating Municipalities: Blythe, Cathedral City, Desert Hot Springs, Indian Wells, Palm Springs, Rancho Mirage, and the Agua Caliente Band of Cahuilla Indians

Project Title: Voluntary Green Building Policy for Commercial Development and Residential Development

Project Purpose: The proposed education and training of building and planning department staff and others who interface with the contractors and property owners will target efforts to encourage building performance that exceed state Title 24 requirements. The program will integrate energy efficiency outreach and education with a core service for the cities as they provide information, project planning and permits at their counter. Through this voluntary green building program focused on existing construction, we will also identify opportunities for market transformation by encouraging contractors to recommend energy efficiency improvements to their clients.

Project Scope and Components: The Implementer will develop a voluntary Green Building policy for commercial development and residential development in the Participating Municipalities, with a focus on existing buildings ("Voluntary Green Building Policy"). As an initial step in the development of this Voluntary Green Building Policy, the Implementer will review and assess existing Green Building policies, the California Green Building Code, and resources of peer municipalities. Using findings from this review and assessment, the Implementer will develop and implement a plan for the development of a template for a Voluntary Green Building Policy appropriate for customization to meet the needs of each Participating Municipality ("Voluntary Green Building Policy Template"). The Implementer will develop a report to include a summary of the resource review and assessment and the Voluntary Green Building Policy Template plan ("Voluntary Green Building Policy Assessment and Planning Report"). The Implementer will use the approved Voluntary Green Building Policy Template to develop a Voluntary Green Building Policy for each Participating Municipality. The Implementer will develop and implement a plan to encourage the adoption of the Voluntary Green Building Policy by each Participating Municipality. The Implementer will document the process for gathering and incorporating stakeholder input to the development of the Voluntary Green Building Policy for each Participating Municipality, including, at a minimum, a list of all events used to gather stakeholder input (e.g., meetings and workshops), including a list of all attendees and respective contact information, and a discussion of how stakeholder input was used in refining the Voluntary Green Building Policy ("Report on Voluntary Green Building Policy Stakeholder Input").

 Deliverables:

1. Voluntary Green Building Policy Assessment and Planning Report

2. Draft Voluntary Green Building Policy Template

3. Final Voluntary Green Building Policy Template

4. Draft Voluntary Green Building Policy for each Participating Municipality

5. Final Voluntary Green Building Policy for each Participating Municipality

6. Draft Voluntary Green Building Policy adoption plan for each Participating Municipality

7. Final Voluntary Green Building Policy adoption plan for each Participating Municipality

8. Report on Voluntary Green Building Policy Stakeholder Input

9. For each Participating Municipality -Resolution adopting Voluntary Green Building Policy or documentation of why Voluntary Green Building Policy was not adopted and related alternate plans

10. Monthly reports of tracked Performance Indicators

Date Approved (Advice Letter (NTP)): March 2011 (March 2011)

Date Completed (est.): Apr 2012   **Date Completed (actual):** Dec 2014

Estimated Cost: $759,333   **Final Program Cost:** $3,924,823 ($4,915,380 Budget)

Local Match Contribution: $0

Project Reimbursed for LG Staff Time: Y / N

Program Budget Unspent: $990,557

Best Practices
• The Green Building Program integrated Title 24, LEED, and CalGreen standards with green building practices to customize it to our region and hot desert climate.
• Due to the economic downturn, we chose a voluntary policy as a mandatory program would not be supported by local governments or the building industry. The program emphasizes education for city staff and property owners to "bring them up to speed" on green building.
• The Program was supported with easy to read and understand materials that the cities could use to help educate homeowners and contractors.
• The Program emphasizes tools for property owners and contractors to learn about energy efficiency measures and help them understand the benefits of green building.

Lessons Learned

- By bringing the participating jurisdictions and stakeholders (USGBC, local architects) into the development of the Green Building policy from the start, we were able to create a Green Building Program that was accepted with few if any changes by cities. The policy is consistent for the entire region, a benefit for implementation and uptake by the building industry.

- Timing is crucial for planning education and outreach events in the desert region. The high temperatures during the summer months are a time when seasonal residents ("snowbirds") leave the desert and local residents and business owners go on vacation.

Knowledge Transferred

- Through the Partnership, Implementer has disseminated Green for Life program information to partners including the Coachella Valley Economic Partnership, Desert Valleys Builders Association, local water districts, and other local governments not served by SCE. We will continue to share information through our Green for Life website, articles in jurisdiction newsletters and websites, outreach events, presentations to community groups, and media/social media outreach.

Next Steps

- Ongoing outreach to the community to promote energy efficiency through the Green for Life program.

- Now that the economy is recovering, interest in green building is increasing. We plan to work with our member cities to promote use of the Green for Life program and a recognition program.

Benefit to the State

- The Green for Life program brought all our participating jurisdictions, six cities and one Tribal government, into consistency with the California Long Term Energy Efficiency Strategic Plan.

Benefit to Local Government

- The development of the Green Building Program would not have been possible without the support from SCE and the CPUC. All local governments in our region benefit from having a consistent green building policy that goes beyond Title 24 and promotes energy efficiency in new and existing buildings.

Successes
• The program was designed to integrate long-term energy efficiency and climate action planning for our local governments with other elements of the Strategic Plan. A strategy was chosen to bring together municipal energy efficiency tasks including benchmarking, commissioning/retro-commissioning, a utility management system, and energy action planning with sustainability programs -- green building and beyond Title 24 tasks as well as greenhouse gas inventories and climate action plans. These tasks were unified as a green government initiative with the Green for Life brand. • All participating jurisdictions adopted the Voluntary Green Building Policy.

Challenges
• The Strategic Plan goal to adopt reach codes was influenced by the economic downturn. Instead of a reach code, we opted for a voluntary green building policy. It would have been very difficult to get a reach code approved given the economic challenges and losses in the construction industry. The building industry was very supportive of our green building programs but would have opposed a reach code. • The timing of trying to potentially propose a reach code with Title 24 being updated to much more strict standards. • The economic downturn made it very challenging for city staffs to work on energy efficiency and sustainability issues. Due to staff cutbacks in many jurisdictions, it was a challenge to keep staff involved and get their input.

2.2.3   City of Delano – Phase 1

Local Government Partnership: Kern County Partnership

Project Title: Adopt a Point-of-Sale Energy Retrofit Program

Project Purpose: The goal of this task was to develop and adopt, as feasible, a point-of-sale program that will address specific prescriptive energy efficient retrofits for existing residential buildings when they are put on the market for sale, making existing buildings more closely aligned with energy efficiency standards of new construction.

Project Scope and Components: A Point-of-Sale Retrofit Ordinance (POSRO) was developed to reduce utility costs by increasing the energy and water efficiency in existing buildings and placed on the agenda for City Council to adopt. Three options were submitted to City Council for adoption: (1) a point-of-sale residential energy retrofit program that requires energy efficiency upgrades of existing single family residential and multi-family properties when

ownership changes occur; (2) a point-of-sale residential energy retrofit program that requires energy efficiency upgrades of existing multi-family homes when ownership changes occur and an energy efficiency report for single family residential properties; and (3) a point-of-sale residential energy retrofit program that requires an energy efficiency report for single family residential and multi-family properties when ownership changes occur; the energy efficiency assessment will result in an informational report and cost estimate (distributed to homebuyer at the time of purchase) on a home's energy efficiency potential. The Council took no action on this agenda item.

Following are the specific steps used in conducting this task:

1. Research other cities on programmatic approaches.
    a. Develop criteria for the program (what to require – for example, weatherization only versus weatherization and other items such as increased insulation, dual pane windows, energy star appliances, higher SEER A/C, etc.).
    b. Develop potential "point system" that would be recommended.
    c. Develop estimated costs that would be incurred by seller/buyer and energy saving benefits. Explore funding opportunities that may be available to sellers/buyers.
    d. Report to Community Development Director on advantages and disadvantages. Director review and comment and direction.
2. Present initial findings to City Council and proposed strategies.
3. Logistics and planning for first and second outreach meetings to present the need for a retrofit program. These meetings are targeted for the general public.
4. Focused workshop with Realtors
5. Develop response to input received from workshops and draft ordinance
6. Final workshop to present draft of new Point of Sale program.
7. Staff report and presentation of proposed ordinance adopting the Point of Sale Program
8. Publication in paper of ordinance

    Deliverables:

1. POS Energy Retrofit Program Assessment and Planning Report
2. POS Energy Retrofit Program Implementation Report
3. Monthly reports of tracked Performance Indicators

Date Approved (Advice Letter (NTP)): March 2011 (August 2011)

Best Practices/Lessons Learned from Strategic Plan (Draft)

Date Completed (est.): June 2012   **Date Completed (actual):** June 2013

Estimated Cost: $15,130   **Final Program Cost:** $324,549 ($379,500 Budget)

Local Match Contribution: $0

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

Program Budget Unspent: $133,951

Best Practices
• When facing political pressure, it is best reassess the situation, provide education to key decision-makers, and promote less contentious policies/guidance.

Lessons Learned
• The public accepts sustainability as a concept as long as it doesn't take much effort from the individual. A corollary is that everyone feels that energy efficiency is the correct direction to go in, but no one wants to be mandated to do this.
• Much of the public feels that government should solve our problems and take care of the community.
• Economics is the thread of resistance encountered among many of the Implementer's audiences.
• Some in the public feel that "Green Building" has been used excessively as a sales gimmick, raising question about the intentions of what is being sought.

Knowledge Transferred
• This document serves as the primary mechanism of conveying best practices and lessons learned from this task. However, the implementer is available to discuss this further with any interested parties.

Next Steps
• Following the non-adoption of POS Energy Retrofit Ordinance, strategies were included in the CAP to promote commercial and residential Green Building, and to provide more education to the residential and commercial sectors on energy efficiency.

Benefit to the State
• The State will benefit from this task because a green building energy code will increase the energy efficiency of the community resulting in reduced energy use and GHG emissions.

Benefit to Local Government
• Following the non-adoption of green building ordinance, strategies were included in the CAP to promote commercial and residential Green Building, and to provide more education to the residential and commercial sectors on energy efficiency.

Successes
• Developed a draft Point-of-Sale (POS) Energy Retrofit Ordinance, with three (3) options, and submitted to the Planning Commission for review and City Council for adoption. The draft ordinance included a summary of benefits and estimates of financial impacts to the Implementer and the community.   o Ordinance was not adopted due to lack of support on City Council, and resistance from many in community

Challenges

• Garnering support from the public and from elected officials was a great challenge
 	
    o Lack of widespread support prevented adoption of ordinance
 	
    o It was known that this would be a challenge, given the state of the local economy and the cultural resistance to government. Despite a well-constructed ordinance supported by compelling cost-benefit analyses, overcoming resistance to mandated energy efficiency measures is a challenge that appears to be insurmountable at this time in Delano.
 	
• The perception that while sustainability and/or energy efficiency are worthwhile to pursue, the public shouldn't be inconvenienced or be required to pay additional for improved sustainability or energy efficiency.
 	
• The ordinance was not adopted due to lack of support on City Council, and resistance from many in community

2.2.4   City of Goleta – Phase 1

Local Government Partnership: South Santa Barbara Partnership

Project Title: Develop and Adopt a Green Building Program

Project Purpose: Implementer will develop and adopt a comprehensive green building program to:

- Improve the likelihood of energy efficiency development or redevelopment which exceeds existing regulations (Title 24) by targeting government officials (City, County, School District, and Special Districts) with decision making and budget authority, and informing them as to the long term financial and environmental benefits of adopting energy efficiency policies and practices;

- Develop an informed group of government officials (City, County, School District, and Special Districts) within a community with the knowledge and tools to foster long term energy efficiency changes; and

- Develop a replicable program template that can be implemented in other communities with minimal costs.

Project Scope and Components: Implementer will develop and adopt a comprehensive green building program to promote green building practices that encourage or require building energy efficiency performance that exceeds state requirements for municipal, residential, and/or commercial development by 15%. Through a process emphasizing stakeholder outreach, establish the framework for a green building program that addresses municipal, residential, and/or commercial development that results in increased building energy efficiency performance.

   Deliverables:

1. Report on status of hiring Consultant or Subcontractor to support the Task
2. Green Building Policy Assessment and Planning Report
3. Complete baseline analysis and inventory of existing city policies and programs; building trend analysis, and research existing green building guidelines and rating systems
4. Conduct stakeholder input process and reach consensus of proposed green building program design; submit stakeholder input form
5. Submit draft Green Building Program policy based on proposed final Program framework to CPM for review and comment
6. Submit Green Building Program Policy to City Council for adoption; if adopted, provide written Green Building policy and evidence it was adopted by the local government and effective date; if not adopted; provide reasons and alternative plans
7. Monthly reports of tracked Performance Indicators

Best Practices/Lessons Learned from Strategic Plan (Draft)

2010-2012 Final Report

Date Approved (Advice Letter (NTP)): March 2011 (April 2011)

Date Completed (est.): July 2012   **Date Completed (actual):** September 2013

Estimated Cost: $194,336   **Final Program Cost:** $349,290 ($358,370 Budget)

Local Match Contribution: $0

Project Reimbursed for LG Staff Time: Ⓨ / N

Program Budget Unspent: $9,080

Best Practices
• This Green Building Program focused on new municipal building construction and major renovations and additions to existing Implementer owned and operated buildings.

Lessons Learned
• Future work should focus on green community development.

Knowledge Transferred
• This document serves as the primary mechanism of conveying best practices and lessons learned from this task. However, the implementer is available to discuss this further with any interested parties.

Next Steps
• The Implementer will develop a neighborhood development floating zone to foster green community development through the 2013-2014 LGP Strategic Plan Pilot Program.

Benefit to the State
• The State will benefit from this task because a green building energy code will increase the energy efficiency of the community resulting in reduced energy use and GHG emissions.

Benefit to Local Government
• The Implementer developed and adopted a Green Building Program for new municipal building construction and major renovations and additions to existing Implementer owned and operated buildings.

Successes
• Developed and adopted a Green Building Program for new municipal building construction and major renovations and additions to existing Implementer owned and operated buildings.

Challenges
• The Implementer did not encounter any significant challenges on this task.

2.2.5 County of Santa Barbara – Phase 1

Local Government Partnership: South Santa Barbara Partnership

Project Title: Adopt a Green Building Program for Municipal Development, Commercial Development and/or Residential Development

Project Purpose: Adopt a green building program with a voluntary component for new and existing municipal development, commercial development and/or residential development.

Project Scope and Components: Develop a Green Building Program with a voluntary component. The Implementer proposes to make some components of CALGreen Tier 1 mandatory and provide incentives for exceeding minimum requirements. The existing *Innovative Building Review Program* (IBRP), which is already well established, will be expanded to include the voluntary portion of Green Building Ordinance. IBRP is a program administered by Planning and Development, which advises developers on how to make their project exceed Title 24 efficiency level by 20% and greater. No incentives will be paid from this contract.

   Deliverables:

1. Green Building Program Assessment and Planning Report
2. Draft Green Building Program
3. Report on Stakeholder Input: Green Building Program

4. Final Green Building Program

5. Submit Green Building Program Resolution to Board of Supervisors for adoption

6. Monthly reports of tracked Performance Indicators

Date Approved (Advice Letter (NTP)): March 2011 (June 2011)

Date Completed (est.): December 2011   **Date Completed (actual):** July 2014

Estimated Cost: $14,198   **Final Program Cost:** $283,555 ($283,048 Budget)

Local Match Contribution: $0

Project Reimbursed for LG Staff Time: Ⓨ / N

Program Budget Unspent: $0

Best Practices
• The Implementer passed legislation to amend existing language within the Implementer's Comprehensive Plan's Energy Element to update the Implementer's voluntary green building program. These updates amended the voluntary program (previously the *"Innovative Building Review Program"*, and re-branded as "Smart Build Santa Barbara") energy efficient tiers to be more stringent than Title 24 and encouraged applicants to exceed these standards.

Lessons Learned
• Be Flexible. The Implementer had to be flexible in developing this program. There was little support for a mandatory green building program, so the mandatory program description was revised to become a voluntary zero net energy program with two tiers. This revised program was adopted.

Knowledge Transferred
• This document serves as the primary mechanism of conveying best practices and lessons learned from this task. However, the implementer is available to discuss this further with any interested parties.

Next Steps
• Through the 2013-2014 LGP Strategic Plan Pilot Program the Implementer will

develop an energy efficiency standard for municipal facilities.

Benefit to the State

- The State will benefit from this green building policy through reduced energy use and reduced GHG emissions.

Benefit to Local Government

- The local government will benefit from this green building policy through reduced energy use and reduced GHG emissions.

Successes

- The Implementer passed legislation to amend existing language within the Implementer's Comprehensive Plan's Energy Element to update the Implementer's voluntary green building program. These updates amended the voluntary program (previously the *"Innovative Building Review Program"*, and re-branded as "Smart Build Santa Barbara") energy efficient tiers to be more stringent than Title 24 and encouraged applicants to exceed these standards.

- Smart Build Santa Barbara is free and available to all new and existing municipal, commercial, and residential developments in Implementer's region.

- This voluntary program was submitted to the CEC for approval under Section 10-106 and approved.

Challenges

- There was little support for a mandatory green building program, since 2013 updates to CALGreen and Title 24 required the checklist to be amended.
    - o The mandatory program description was revised to become a voluntary zero net energy program with two tiers instead of three.

2.2.6   City of Simi Valley – Phase 2

Local Government Partnership: Simi Valley Partnership

Project Title: Develop and Adopt Voluntary Green Building Policy & Program for Existing Commercial and Residential Facilities

Project Purpose: Implementer will develop a voluntary program that will encourage the installation of energy efficiency measures for existing commercial and residential facilities. The program focuses on increasing the installation of energy efficient equipment that exceeds Title 24, specifically in existing construction.

Project Scope and Components: Develop policies and procedures, including implementation plan, for the Voluntary Green Building Policy for existing buildings that will encourage the installation of energy efficiency measures that exceed existing building codes.

> **Deliverables:**

1. Report on status of Implementer or Subcontractor to help support the Task
2. Assessment and planning report of an outline for the Voluntary Green Building Policy
3. Report on stakeholder input
4. Develop first draft of the Voluntary Green Building Policy.
5. Develop final Voluntary Green Building Policy for city council approval.
   Obtain city council decision on adopting Voluntary Green Building Policy
6. Monthly status report

Date Approved (Advice Letter (NTP)): December 2011 (December 2011)

Date Completed (est.): January 2013   **Date Completed (actual):** November 2012

Estimated Cost: $17,000   **Final Program Cost:** $611,356 ($389,500 Budget)

Local Match Contribution: $0

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

Program Budget Unspent: $0

Best Practices
• The key elements to incentivize participation in the program are: (a) education and outreach to the development and residential community, (b) online permitting, and (c) links to available utility and Energy Upgrade CA incentive programs.

Lessons Learned
• Have the opportunity to promote benefits of energy efficiency and available incentives

to the community through a voluntary green building program and policy.

Knowledge Transferred

- This document serves as the primary mechanism of conveying best practices and lessons learned from this task. However, the implementer is available to discuss this further with any interested parties.

Next Steps

- Implementer will consider incorporating water and gas in the policy.

- Staff will work with SCE for additional Energy Upgrade CA training.

Benefit to the State

- The State will benefit from this green building policy through reduced energy use and reduced GHG emissions.

Benefit to Local Government

- A policy and program have been established and will be used to influence smarter energy buildings in the community.

- Have the opportunity to promote benefits of energy efficiency and available incentives to the community through a voluntary green building program and policy.

Successes

- The Voluntary Green Building Program and Policy were both developed.

- The key elements to incentivize participation in the program are: (a) education and outreach to the development and residential community, (b) online permitting, and (c) links to available utility and Energy Upgrade CA incentive programs.

- The Program and Policy were approved by City Council.

Challenges

- No significant challenges were encountered in this task.

2.2.7   City of South Gate – Phase 1

Local Government Partnership: South Gate Partnership

Project Title: Develop Voluntary Green Building Policy & Program

Project Purpose: Develop policies and procedures, including implementation plan, for the Voluntary Green Building Program that will encourage building performance that exceeds Title 24. The program will have customer, contractor and city staff informational and educational elements. Plan check procedures will be enhanced to identify energy efficiency opportunities. Incentives will be developed to encourage the installation of energy efficiency.

Project Scope and Components: Implementer will develop a voluntary Green Building policy focused on municipal, commercial development and existing residential development and facilitate its adoption by the Implementer (Voluntary Green Building Policy), and develop a voluntary green building program for existing construction (Voluntary Green Building Program). Implementer will ensure that the Program is designed to encourage building performance that exceeds Title 24 requirements by capitalizing on the unique position and role that local government has in reviewing construction activity taking place in the city.

> **Deliverables:**

1. Voluntary Green Building Policy Assessment and Planning Report
2. Memorandum report on findings of review of training programs offered by the California IOUs relevant to the training component for Implementer Building and Safety Department staff, including justification of decision to use all, a portion or none of IOU program resources
3. Draft Voluntary Green Building Program Manual
4. Final Voluntary Green Building Program Manual
5. Draft Voluntary Green Building Program Marketing Plan
6. Final Voluntary Green Building Program Marketing Plan
7. Draft Voluntary Green Building Collateral Materials, program forms and constituent feedback surveys (excluding marketing materials)
8. Final Voluntary Green Building Collateral Materials program forms and constituent feedback surveys (excluding marketing materials)
9. Draft Voluntary Green Building Training Materials
10. Final Voluntary Green Building Training Materials
11. Draft Voluntary Green Building Policy

12. Final Voluntary Green Building Policy

13. Report on Voluntary Green Building Policy Stakeholder Input

14. Resolution adopting Voluntary Green Building Policy by Implementer or documentation of why Voluntary Green Building Policy was not adopted and related alternate plans

15. Draft revised Voluntary Green Building Program Manual

16. Final revised Voluntary Green Building Program Manual

17. Monthly report of tracked Performance Indicators

Date Approved (Advice Letter (NTP)): March 2011 (May 2011)

Date Completed (est.): October 2012   **Date Completed (actual):** April 2013

Estimated Cost: $82,876   **Final Program Cost:** $887,332 ($886,000 Budget)

Local Match Contribution: $0

Project Reimbursed for LG Staff Time: Ⓨ / N

Program Budget Unspent: $0

Best Practices
• Effectively implementing a beyond code program can be challenging for local governments. Through the implementation of this task (Voluntary Green Building Policy and Program) the following best practices were used as a guiding standard. 　○ Set a clear policy and program scope. The Program focused on reducing the energy and water consumption of existing single family residences. Future program augmentations will occur in the expansion of target audience and the expansion of the green building elements. 　○ Determine the best method in which you can bring your community awareness of the program. The City's channel, newsletter, community events, e-mail communication, and website were utilized to promote the Program. These outlets complemented a larger marketing approach within the Voluntary Green Building Policy & Program Marketing Plan.

Lessons Learned
• Challenges in implementing this type of program can include industry opposition, difficulties in deciding what programs and performance criteria to use, and conflicting agendas of those involved such as planning and development staff, permitting and code enforcement officials. Lesson learned throughout the implementation of this task

were:

- o Existing green building policies implemented by California cities typically include third-party green building rating systems such as the USGBC's LEED system and Build It Green's GreenPoint Rated program, and programs that focus primarily on energy efficiency by encouraging retrofits that exceed Title 24 requirements.

- o Third-party systems, as the two listed above, provide structure and verification protocols for cities to go beyond minimum CALGreen requirements and receive recognition for sustainability.

- o USGBC's LEED rating system is the most widely adopted and most comprehensive standard in the green building industry. It offers different options of rating such new construction or existing buildings, as well as varying levels of certification. LEED promotes a whole-building approach to sustainability by recognizing performance in the following areas: Sustainable Sites, Water Efficiency, Energy and Atmosphere, Materials and Resources, Indoor Environmental Quality, and Location and Linkages. Resources on LEED government policies and incentives are available on the website. The LEED silver certification is comparable to requirements under the California Green Buildings Standard Code (CALGreen).

- o Build it Green's GreenPoint Rating system for homes was updated in Spring of 2010 to align with the CALGreen code requirements, and are consistent with California's energy and water utility programs. GreenPoint Raters® can provide third-party verification acting on behalf of the applicant and/or on behalf of the local enforcement agency. Similar to LEED, GreenPoint Rated looks at holistic residential building sustainability in the following areas: Resource Conservation, Indoor Air Quality, Water Conservation, Community, and Energy Efficiency.

- o Local jurisdictions can set their building energy efficiency standards more stringent than the statewide Standards by requiring or encouraging buildings to obtain energy performance scores at a percentage beyond Title 24. The State has established a process for local governments to adopt and enforce energy standards that save more energy and pass a cost-effectiveness evaluation. All enforceable "reach codes" must be approved by the California Energy Commission.

Knowledge Transferred
• Through the implementation of this task municipal staff developed and adopted a unique program that fit the cities needs and the unique building standards of the city. With this information the city can continue to expand the program as standards in building practices advance and assist the state in reaching its energy efficiency goals.

Next Steps

- Implementer will continue to develop an appropriate infrastructure that will offer contractors and residents a gradual transition into adopting green building practices through the Voluntary Green Building Program. Since the inception of this program it has continued to be a resource for residents, contractors and building professionals.

- Continue to seek ways that could allow the program to expand as the city becomes more aggressive in saving energy usage.

Benefit to the State

- Local governments integrating energy efficiency in their municipal operations align with the state's "loading order" of first addressing energy efficiency as California's top priority resources.

Benefit to Local Government

- The Voluntary Green Building Policy & Program will reduce the energy consumption of existing residential, commercial, industrial and municipal facilities. It is also expected that the energy consumption of existing buildings in the residential and commercial sectors will be reduced relative to square footage.

- A successful green building program will provide the city and the wider community with tangible improvements to overall quality of life. Benefits to homeowners include energy savings, lower operating costs, increased indoor environmental quality, and increased resale potential of their property. Additional benefits include increased economic development and community vitality, enhanced public health and safety, the development of positive relationships with the building industry, and compliance with state building codes.

Successes

- Implementer developed and set their own building energy efficiency standards establishing guidelines for implementing the Voluntary Green Building Program. The Program encourages green building practices in the residential building sector, and build capacity within the city to promote such practices. As a key element of the Program, the city encouraged the community to participate in the statewide energy efficiency retrofit program—Energy Upgrade California (EUCA)—through marketing, outreach, and a fast-track permitting service. The city provided expedited permitting and inspection services to applicants who demonstrated participation in the EUCA program.

Challenges

- The following challenges arose for the city during implementation and would arise for any city choosing to adopt more stringent building codes:
  - Pursuing LEED certification adds between 3-5% to project costs in the form of incremental "soft costs" for design, documenting compliance, and verification.
  - Build it Green's GreenPoint Rating system is focused on residential buildings, and therefore was not applicable for most of the city's facilities.
  - Adopting a policy that references Title 24 only addresses new construction and major renovations that trigger the energy code. If a predominance of permit applicants falls into the category of minor renovations and retrofits there will be a large sector, relative to the overall building stock, that will not be influenced by a policy based on Title 24.
  - Furthermore, pursuing a building policy that focuses on only energy savings exceeding Title 24 overlooks measures of building sustainability, specifically waste, water use and storm water management, materials, indoor air quality, and GHG emissions from transportation. Addressing these measures is mandatory under the CALGreen code, effective as of January 2011 for new construction. Neglecting to address these measures alongside energy efficiency improvements may result in having to make more expensive building updates in the long-term to comply with California policy.

2.3   Strategic Plan Task 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.

2.3.1   City of South Gate – Phase 1

Local Government Partnership: South Gate Partnership

Project Title: Develop Expanded Pre-sale Housing Inspection Program

Project Purpose: To expand an existing Pre-Sale Housing Inspection Program to encourage residential property buyers/owners to achieve "reach" codes (exceeding Title 24). Property owners will be educated on energy efficient improvements that can be installed to make the house more energy efficient and more cost-effective to run. It will be a tool to encourage property owners to install equipment above Title 24 standards by assuring that improvement recommendations will qualify for SCE incentive programs.

Project Scope and Components: Implementer will expand the scope of its existing Pre-Sale Housing Inspection Program to include the identification of EE retrofit opportunities to

prospective buyers. Information on recommended EE Measures including a description of the Measure, related estimated energy saving benefits and information on how/where to purchase it, and applicable SCE programs will be provided to the residential property buyer with a Pre-Sale Housing Inspection report.

Deliverables:

1. Pre-Sale Program Assessment and Planning Report

2. Draft expanded Pre-Sale Housing Inspection Program materials, including energy efficiency Measure checklist and informational materials, inspection report template, and training materials

3. Final expanded Pre-Sale Housing Inspection Program materials, including energy efficiency Measure checklist and informational materials, inspection report template, and training materials

4. Resolution adopting expanded Pre-Sale Housing Inspection Program by Implementer (or equivalent written documentation of its approval for implementation) or documentation of why it was not adopted and related alternate plans

5. Monthly report of tracked Performance Indicators

Date Approved (Advice Letter (NTP)): March 2011 (May 2011)

Date Completed (est.): November 2011   **Date Completed (actual):** August 2012

Estimated Cost: $44,500   **Final Program Cost:** $887,332 ($886,000 Budget)

Local Match Contribution: $0

Project Reimbursed for LG Staff Time: Ⓨ / N

Program Budget Unspent: $0

Best Practices
• Effectively implementing a point of sale program can be challenging for local governments. Through the implementation of this task the following best practices were used as a guiding standard.
o Build upon current operating structures. The city's housing inspection program was expanded to include the promotion of energy efficiency retrofit opportunities and code compliance education for inspection staff.
o Define a clear goal. Through this program, the city will increase community awareness of and demand for residential energy efficiency opportunities and utility incentives, with the goal of increasing residential installations beyond

Title 24 requirements.

Lessons Learned

- Challenges in implementing this type of program are that they are rare and resources are difficult to find from peer municipalities, starting from scratch is often the case. Lesson learned throughout the implementation of this task were:

    o As a voluntary program, the Expanded Pre-Sale Housing Program will initially rely on various city, state and utility incentives as "carrots" to help pull residents into choosing energy efficient options for their homes.

Knowledge Transferred

- Through the implementation of this task, implementer staff received training resources for their Building and Safety and Public Works staff. Additional resources such as measure checklist report templates. Lists of energy efficiency measures most likely to be identified during inspections. Methods for integration of energy efficiency upgrade opportunities into existing inspection procedures. And examples of pre-sale property reports that encompass code compliance and energy conservation.

Next Steps

- The point of sale program is currently being implemented pre-sale housing inspection staff provides information on rebates and incentives applicable to residential buildings alongside the inspection report to the grantee or transferee. Staff also promotes the fast-track permitting option to those required to apply for permits.

- The city will continue to seek opportunities to further expand this program if resources permit.

Benefit to the State

- Local governments integrating energy efficiency in their municipal operations align with the state's "loading order" of first addressing energy efficiency as California's top priority resources.

Benefit to Local Government

- The Point-of-Sale Program will increase Title 24 code compliance through staff education; and encourage residential property buyers/owners to achieve "reach" codes (exceeding Title 24) through the cross-marketing of energy efficiency measures

eligible for utility incentives and/or rebates.

Successes

- The Expanded Presale Housing Program now incorporates language supporting energy efficiency as well marketing collateral developed by the Implementer promoting the incentives/rebates that are available through SCE.

- The expanded program now includes an educated staff on energy efficiency and marketing collateral which will serve to inform participants of a property sale on installing equipment above Title 24.

Challenges

- The Implementer intended to have pre-sale housing inspectors utilize a new energy efficiency opportunities check list as part of the inspection process. However, due to staff cuts inspectors felt that adding this activity to the process would be burden and would impact the number of sites expected daily. In response, the Implementer decided to include marketing collateral that would be included in each inspection report that promoted SCE utility.

- Pre-sale housing inspection staff did not believe there was sufficient capacity to include EE in reports.
  - This perception limited the possible scope of inspector participation in promoting the program.

2.4 Strategic Plan Task 1.1.4 - IDSM Code Updates

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

2.4.1 Western Riverside Council of Governments – Phase 2

Local Government Partnership: Western Riverside Council of Governments Energy Leader Partnership

Participating Municipalities: Calimesa, Canyon Lake, Hemet, Lake Elsinore, Menifee, Murrieta, Norco, Perris, San Jacinto, Temecula, and Wildomar

Project Title: *Change Local Building Code to Allow and Encourage Integration of Energy Efficiency*

Project Purpose: This task will encourage adoption and implementation of increasingly stringent building codes that encourage increased energy efficiency for new construction and retrofit projects.

Project Scope and Components: Implementer will work with Participating Municipalities, (including, but not limited to, Planning Directors' Committee, a Technical Advisory Committee(s), City Managers, and Implementer's Executive Committee (comprised of elected officials from each of its member agencies)) to examine the existing building code of the Participating Municipalities and develop a body of additional "reach" codes that the Participating Municipalities can adopt. The Implementer will develop a menu of standardized local codes for use by jurisdictions that allow and encourage the integration of energy efficiency, demand response and on-site generation in new construction and re-construction of facilities in each Participating Municipality. From the complete list of codes drafted by the Implementer, each jurisdiction will consider and enact codes which are most appropriate for their particular community.

Deliverables:

1. Report on Status of Implementer or Subcontractor to Support the Task
2. Reach Code Assessment and Planning Report
3. Draft Code and Ordinance Amendment
4. Report on Stakeholder Input
5. Final Code and Ordinance Amendment

6. Submit Code and Ordinance Amendment to Participating Municipalities for Adoption; submit to the California Energy Commission (CEC) for Approval Under Section 10-106

7. Monthly reports of tracked Performance Indicators

Date Approved (Advice Letter (NTP)): December 2011 (December 2011)

Date Completed (est.): Jun 2013   **Date Completed (actual):** Dec 2013

Estimated Cost: $154,785   **Final Program Cost:** $1,173,196 ($2,061,593 Budget)

Local Match Contribution: $0

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

Program Budget Unspent: $888,397

Best Practices
• Developed a menu of standardized local energy codes exceeding Title 24 for consideration of adoption by municipalities. This menu can be used by other interested parties.

Lessons Learned
• Consistent engagement of Implementer's Staff and public is important to the success of a Reach Code

Knowledge Transferred
• Knowledge from the development of voluntary reach codes are directly related and can be transferred to the required standards in the progression of the next generation of Title 24 standards (e.g., the reach codes developed based on a 2008 standard are the logical first step towards the understanding of 2013 standards)

Next Steps
• Solicitation of jurisdictional interest in developing additional reach codes on a new, more energy stringent 2013 standard.

Benefit to the State

- Implemented measure will aid with the reduction of greenhouse gas emissions (GHG's) such as AB 32.

Benefit to Local Government

- Streamlined standardized permitting process across the sub-region will reduce significant energy consumption, time, and cost on residential and commercial scale deployments.

Successes

- Developed a menu of standardized local energy codes exceeding Title 24 for consideration of adoption by municipalities.

Challenges

- No reach codes exceeding T24 were adopted.

- Participating Municipalities were reluctant to implement changes to building codes with New 2013 Title 24 standards about to be released.

2.5 Strategic Plan Task 1.1.5 –Programs That Encourage Energy Efficiency

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.

2.5.1 City of Brea – Phase 1

Local Government Partnership: Community Energy Partnership

Participating Municipality: City of Santa Monica

Project Title: Purchase and Implement and Energy Efficiency Online Permitting System in Conjunction with Santa Monica's CEEPMS System

Project Purpose: The installation and implementation of an energy efficiency on-line permit process will promote more energy efficiency permits, streamline processing for customers and the Implementer, and provide a means to track energy efficiency projects.

Project Scope and Components: This task will be conducted in conjunction with the Participating Municipality's Community energy efficiency Project Management System (CEEPMS), with Participating Municipality assuming the lead role. Implementer will implement an energy efficiency online permitting system that promotes energy efficiency projects, streamlines processing for customers and provides the Implementer the means to track energy efficiency projects. Online permitting will be available for building permits, including electrical, HVAC and plumbing permits from the Implementer and will allow for on-line permit submission. In SP Task 1.2.1 ("Implement any of the strategies developed in SP Task 1.2.1 A") Implementer will develop a program to enhance the use of the on-line permit system.

Technical issues arose that resulted in the vendor stopping the integration work. The CEEPMS framework employed by the Implementer's partner, the Participating Municipality, and the Implementer's information system did not integrate properly. Due to the technical issues the task was terminated, as there was no remedy to resolve the incompatibility.

> **Deliverables:**

1. Assessment and Planning Report for the On-Line Permitting System
2. Report on Status of Consultant or Subcontractor to Support the Task
3. Assessment and Planning Report for the Development of a Program That Encourages Energy Efficiency
4. Review Documents Developed During Program Implementation
5. Monthly Reports on Outreach and Education Efforts
6. Plan for Sharing Lessons Learned/Best Practices with Other Local Governments.
7. Submit Program that Promotes Energy Efficiency to City Council for Adoption
8. Monthly reports of tracked Performance Indicators

Date Approved (Advice Letter (NTP)): March 2011 (April 2011)

Date Completed (est.): April 2012   **Date Completed (actual):** Task Terminated due to technical incompatibility between the systems used by CEEPMS and Implementer.

Best Practices/Lessons Learned from Strategic Plan (Draft)

Estimated Cost: $46,160   **Final Program Cost:** $241,581 ($241,153 Budget)

Local Match Contribution: $0

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

Program Budget Unspent: $0

Best Practices
• Identify low-hanging fruit in order to encourage energy efficiency.

Lessons Learned
• Programs should require only moderate effort in order to see results.

Knowledge Transferred
• Posted energy efficiency information on City website.

Next Steps
• Continue implementing energy-saving measure where possible.

Benefit to the State
• By implementing this program energy will be used more efficiently, thereby reducing energy use and GHG emissions. Increasing energy efficiency aligns with the Energy Efficiency Strategic Plan and the State's "loading order". • Lessens the use of State resources

Benefit to Local Government
• Saves taxpayer money.

Successes
• Businesses have gone the extra mile to save energy, and the City has presented them with a "Green Life, Green Brea" award

Challenges
• How to implement energy-saving measures in multi-family units not owned by the City

2.5.2 City of El Segundo – Phase 1

Local Government Partnership: South Bay Partnership

Project Title: Online Permitting Service

Project Purpose: There are many impediments to code compliance, not least of which include the need to visit City Hall and handle paper work in person. By developing an online permitting service for select building needs this major hurdle to code compliance can be removed and at the same time educate property owners regarding the complementary energy efficiency improvement opportunities available for the property.

Project Scope and Components: Implementer will develop an online permitting service, that will allow building, HVAC, plumbing and electrical permits to be submitted on-line. The focus of the system will be to identify opportunities for energy efficient measures. When the resident applies for the permit and if the project has a potential corresponding rebate, the permitting service will embed the SCE application onto the webpage for easy downloading by the resident.

Deliverables:

1. Report on status of Implementer or Subcontractor(s) to help support the Task
2. Assessment and planning report for the development of the on-line permitting service
3. Detailed specifications report for the on-line permitting service
4. Implementation report for the on-line permitting service
5. Monthly status report

Date Approved (Advice Letter (NTP)): March 2011 (April 2011)

Date Completed (est.): January 2012   **Date Completed (actual):** September 2012

Estimated Cost: $83,000   **Final Program Cost:** $454,153 (486,500 Budget)

Local Match Contribution: $0

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

Program Budget Unspent: $32,347

Best Practices
• Through the implementation of this task (Procure an Online Permitting System) the following best practices were used as a guiding standard.   ○ Identify operation requirements that are unique to your city's organization. Implementer's staff researched and identified an online permitting system that would fulfill the requirements of the program as well work with current municipal permitting operations.   ○ Tie in energy efficiency. The online permitting system is utilized to encourage residents to install energy-efficient equipment and measures that exceed Title 24 standards. The online permitting system and site was procured using a module provided by the city's existing permit vendor. The design of the system and site was developed by integrating energy efficiency information and links for the applicant to easily apply for the available rebates based on permit type. Staff was trained on the new system.

Lessons Learned
• **Engage all stakeholders at the beginning of the program to gain early buy-in.** Many of the tasks required intra-departmental and inter-departmental support from staff not previously familiar with the overall goal and intent of the program. This lack of familiarity caused challenges and delays with the implementation of tasks. In the future, the Implementer would invite key Staff from various departments to participate in energy management and planning discussions to ensure transparent communication of the Implementer's energy reduction objectives.   ○ Along similar lines, include Building and Safety Staff in the various stages of development of the online permit service has many benefits. The Staff can provide critical input on how to optimize the functionality of the system. Staff are most familiar with the permit applicants, and therefore can best communicate their preferences, tendencies, and thereby speak to how to develop the online permit service to cater to these attributes. Customizing the system to fit user needs leads to higher usage rates. This knowledge of the user is also transferable to marketing of the service. Staff provided information that helped to craft messaging and communications to the target audiences.   • **Getting early buy-in from department directors and council members results in increased engagement from staff and effective "word-of-mouth" marketing.** The Director of Planning was a champion of the service since the beginning of the program. This was extremely helpful in moving the development through technical

challenges and road bumps along the way.

- o We also provided an early preview of the system to City Council which allowed them to be aware of the new service in development, stoking interest at the beginning. A follow up Special Agenda meeting once the service was near launch was held to remind them of the benefits and to demonstrate the functionality of the system.

- o Keeping the City Council engaged led to high-level support for the service and armed council members with talking points to inform their constituents of the new service being provided by the Implementer.

- o High-level support also had a trickle-down effect on staff, as they were more willing to show support and be engaged in promoting the new service.

- **Incorporating benefits on energy efficiency and links to rebate program adds value to the permit process for applicants.**

- o The community is now able to more easily comply with permit requirements; and

- o Gain useful information about efficiency benefits and incentive programs to help pay for projects.

Knowledge Transferred

- Implementer can share information with cities participating in Southern California Edison's (SCE) Energy Leader Partnership program through SCE's peer meetings and newsletter, participating in best practices interviews facilitated by SCE, and through other local government events. For example, Implementer representatives presented their lessons learned on development of their Online Permitting Systems at the SCE Partnership Strategic Plan Conference.

Next Steps

- Implementer will continue to facilitate code compliance by streamlining and making the issuance of building permits for qualifying energy efficiency projects more convenient;

- o Continue to promote the installation of energy efficiency equipment and measures by residents and businesses within the city by providing information on applicable utility rebates and incentives; and

- o Integrate energy efficiency in the city's core municipal services, and continue to allocate funding resources to educate city staff on the connection between code compliance, building permitting, and energy efficiency.

Benefit to the State

- Local governments integrating energy efficiency in their municipal operations align with the state's "loading order" of first addressing energy efficiency as California's top priority resources.

Benefit to Local Government

- Online permitting website has been live and in use since September 2012

- Internal Capacity Building. Key Staff have been involved in the development of the system from the beginning, resulting in a very informed Building Permit Staff that can effectively communicate the benefits of the online permitting to customers.

Successes

- The online permitting system and site was procured using a module provided by the Implementer's existing permit vendor.

- The design of the system and site was developed by integrating energy efficiency information and links for the applicant to easily apply for the available rebates based on permit type.

- Staff was trained on the new system

Challenges

- This task went smoothly. We did not encounter any challenges. (Largely because we involved City staff from the beginning in the implementation of this task).

2.5.3   City of Inglewood – Phase 1

Local Government Partnership: South Bay Partnership

Project Title: Online Permitting System for Energy Efficiency Projects

Project Purpose: Through this project Implementer increase the number of energy efficiency permits by streamlining and simplifying the permitting process for qualified projects.

Project Scope and Components: Implementer will review and assess online permitting systems implemented by peer local governments including the online component of the Eden permitting system currently used by the Implementer in order to leverage existing resources. The Implementer will use findings from this review and assessment to develop a plan for the

development and implementation of the Online Permitting System. This plan will include all elements of development and implementation (including training components), and technical specifications for the Online Permitting System and its Customer-facing Web site. The Implementer will prepare a report describing this plan and summarizing the review and assessment of online permitting systems adopted by peer municipalities and related resources ("Online Permitting Assessment and Planning Report").

The Implementer will ensure that the Online Permitting System is compatible with the existing back-office processing and reporting systems. The Implementer will train the Implementer's Planning and Building Department staff and other Implementer staff on the Online Permitting System, as described in the Online Permitting Assessment and Planning Report, and will prepare a report documenting the type(s) of staff training offered, including dates, locations and names, title and contact information of all attendees at each staff training ("Online Permitting System Staff Training Report"). The Implementer will ensure that the Customer-facing Website that will allow Customer use of the Online Permitting System is updated as appropriate to include full instruction on the Online Permitting System's use and functions, and content appropriate for the promotion of the Online Permitting System and its services. The Implementer will develop and implement a community outreach plan to promote Customer use of the Online Permitting System.

The Implementer cancelled this task due to personnel changes Staff, the limited capability of their current permitting software, and the uncertainty of the implementation timeline.

Deliverables:

1. Draft Online Permitting Assessment and Planning Report
2. Final Online Permitting Assessment and Planning Report
3. Integration of Online Permitting System with Implementer's Website
4. Documentation of updated internal permit processing procedures
5. Online Permitting System Staff Training Report
6. Draft Online Permitting System Customer-facing Website content, including instructions for use
7. Final Online Permitting System Customer-facing Website content, including instructions for use
8. Draft Online Permitting System promotion and community outreach plan and materials
9. Final Online Permitting System promotion and community outreach plan and materials
10. Beta Online Permitting system and Customer-facing Website

11. Live and fully functional Online Permitting system and Customer-facing Website

12. Online Permitting System notification to Implementer contractors

13. Draft plan for sharing information with other local governments

14. Final plan for sharing information with other local governments

15. Monthly report of tracked Performance Indicators

Date Approved (Advice Letter (NTP)): March 2011 (August 2012)

Date Completed (est.): June 2013   **Date Completed (actual):** Task Terminated November 2014 due to lack of staff support for the task.

Estimated Cost: $84,899   **Final Program Cost:** $2,290 ($84,899 Budget)

Local Match Contribution: $0

Project Reimbursed for LG Staff Time: Ⓨ / N

Program Budget Unspent: $82,609

Best Practices
• None. Task terminated by the Implementer in November 2014.

Lessons Learned
• From the utility perspective qualifying the commitment should be conducting prior to engaging in the funding of the task.

Knowledge Transferred
• None. Task terminated by the Implementer in November 2014.

Next Steps
• None. Task terminated by the Implementer in November 2014.

Benefit to the State

- None. Task terminated by the Implementer in November 2014.

Benefit to Local Government
• None. Task terminated by the Implementer in November 2014.

Successes
• Task terminated by the Implementer in November 2014.

Challenges
• In November 2014, the Implementer decided not to proceed with this online component due to city personnel changes, the limited capability of its current permit software, and the uncertainty of the installation of the Implementer's new administrative system. As such, this task has been terminated.

2.5.4   City of San Bernardino – Phase 2

Local Government Partnership: Community Energy Partnership

Project Title: Develop and Implement an On-line Building Permitting Process

Project Purpose: By establishing expedited permitting processes or other incentives to encourage green building and above code developments, customers will be encouraged to pursue energy efficiency. The online permitting system will support this goal by fast tracking those projects that include EE measures.

Project Scope and Components: Implementer will design or procure and implement an energy efficiency project on-line building permit process to promote energy efficiency in new project permits within the Participating Municipality's boundaries. Through this task the Implementer will develop a streamlined online and fully integrated permitting process for customers incorporating energy efficiency elements in the construction process as well as provide a means for tracking energy efficiency projects by the Implementer.

Deliverables:

1. Report on status of Implementer or Subcontractor to support the task
2. Assessment and planning report for the on-line permitting system
3. Assessment and planning report for the development of a Program that encourages Energy Efficiency
4. Review documents developed during Program implementation
5. Monthly reports on outreach and education efforts
6. Plan for sharing lessons learned/best practices with other local governments.
7. Submit Program that promotes Energy Efficiency to City Council for adoption
8. Monthly reports of tracked Performance Indicators

Date Approved (Advice Letter (NTP)): December 2011

Date Completed (est.): January 2013   **Date Completed (actual):** Task Terminated by the Implementer due to lack of staff resources, Q1-2013.

Estimated Cost: $ 221,900   **Final Program Cost:** $258,468 ($512,620 Budget)

Local Match Contribution: $0

Project Reimbursed for LG Staff Time: Y / N

Program Budget Unspent: $254,152

Best Practices
• None. Task was dropped by the City due to lack of staff resources, Q1-2013.

Lessons Learned
• Ensure adequate resources are assigned for the entirety of the program or contract out the work.

Knowledge Transferred
• None. Task was dropped by the City due to lack of staff resources, Q1-2013.

Next Steps
• There are no Strategic Plan activities currently planned for the City of San Bernardino. However, the City of San Bernardino will continue to pursue Strategic Plan activities through the Community Energy Leader Partnership.

Benefit to the State
• None. Task was dropped by the City due to lack of staff resources, Q1-2013.

Benefit to Local Government
• None. Task was dropped by the City due to lack of staff resources, Q1-2013.

Successes
• None. Task was dropped by the City due to lack of staff resources, Q1-2013.

Challenges
• Task dropped by the City due to lack of staff resources, Q1-2013.

2.5.5   County of Santa Barbara – Phase 1

Local Government Partnership: South Santa Barbara Partnership

Project Title: Expand the *Innovative Building Review Program* (IBRP) to Include Elements of Building Performance

Project Purpose: Develop and adopt programs to encourage energy efficiency such as on-line permitting, separate voluntary Zero Net Energy permit processes through IBRP offering reduced energy plan review costs and expedited plan review, density bonuses, or a recognition program.

Project Scope and Components: The *Innovative Building Review Program* (IBRP) is offered through the Implementer's Building and Safety Division. The IBRP is a free program that advises homeowners and developers on how to make their new construction or remodeling projects more energy-efficient. The IBRP is made up of a diverse group of local professionals including contractors, architects, engineers, energy consultants, and government officials. These professionals have a tremendous amount of knowledge that they are willing to provide on a volunteer basis. The original scope of work called for the coordination of efforts between IBRP and empower Central Coast, an energy efficiency financing program. It was determined that more direct linkages between the two programs could be made to the benefit of both.

Linked the emPower Central Coast Program, which encourages energy efficiency, to the Smart Build Santa Barbara Program that offers reduced energy plan review costs, expedited plan review, and a resolution of commendation from the Board of Supervisors. Applicants using the emPower Central Coast Program now receive an information brochure about the Implementer's voluntary green building program and vice versa.

Along with technical assistance, the IBRP also provides a number of permitting incentives to participants that reach certain energy efficiency target levels. One of the most popular incentives is an expedited review of your project's plan check through the Building & Safety Division. Another is a 50% reduction on the energy plan-check fee.

> **Deliverables:**

1. Green Building Program Assessment and Planning Report
2. Draft Green Building Program
3. Report on Stakeholder Input: Green Building Program

4. Final Green Building Program

5. Submit Green Building Program Resolution to Board of Supervisors for adoption

6. Monthly reports of tracked Performance Indicators

Date Approved (Advice Letter (NTP)): March 2011 (June 2011)

Date Completed (est.): February 2012   **Date Completed (actual):** July 2014

Estimated Cost: $85,098   **Final Program Cost:** $283,555 ($283,048 Budget)

Local Match Contribution: $0

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

Program Budget Unspent: $0

Best Practices
• Part of the Implementer's updates to its green building program included a "Zero Net Energy" tier where existing and new residential and nonresidential buildings shall demonstrate that, averaged over one year, 100% of the energy needs are met through renewable sources. This tier allows applicants who are proposing Zero Net Energy projects to receive expedited permit review, a reduction in plan check fees, use of Program logo for marketing, and a Board of Supervisors commendation.

Lessons Learned
• There was little support for a mandatory green building program. The mandatory program description was amended to become voluntary.

Knowledge Transferred
• emPower Central Coast has done extensive work to share their experiences, lessons learned and best practices with other communities groups and local governments, including presenting at, and recently becoming a member of, the Local Government Sustainable Energy Coalition (LGSEC), attending and presenting at meetings with the State Wide Energy Efficiency Collaborative (SEEC), staff also regularly attends the monthly South County Energy Efficiency Partnership (SCEEP) meetings. Staff from emPower attended and presented at meetings of local municipal boards and partnerships, such as Goleta Design and Review Board, the City of Santa Barbara Planning and Building staff, Resilient Communities Symposium, Green Business Energy Efficiency Forum, Central Coast Sustainability Summit, Goleta Planning and Building staff, and the South Coast Sustainability Summit. On the national level, staff

from emPower has attended Affordable Comfort Incorporated (ACI) conference, presented at the National Association of Counties (NACO) and attended several Better Building Conferences, which allowed them to review and share best practices along with network with other home energy efficiency programs. In addition, the US Department of Energy, California Energy Commission, California Public Utility Commission and other agencies often share the emPower program model with other communities as an innovative or replicable program design.

Next Steps

- Train staff and volunteers in the Smart Build Santa Barbara and B&S regarding emPower Central Coast program offerings and processes.

- Streamline permitting process with B&S division. Develop guide for permitting counters across the County to use to identify and process emPower Central Coast projects if permitting incentives are made available.

- Through emPower Central Coast's marketing resources, develop and produce co-branded or cross referral promotional material, including web references, newsletters and collateral to be placed at counter spaces, etc.

Benefit to the State

- By implementing this program energy will be used more efficiently, thereby reducing energy use and GHG emissions. Increasing energy efficiency aligns with the Energy Efficiency Strategic Plan and the State's "loading order".

Benefit to Local Government

- By implementing this program energy will be used more efficiently, thereby reducing energy use and GHG emissions. Increasing energy efficiency aligns with the Energy Efficiency Strategic Plan and the State's "loading order".

Successes

- Part of the Implementer's updates to its green building program included a "Zero Net Energy" tier where existing and new residential and nonresidential buildings shall demonstrate that, averaged over one year, 100% of the energy needs are met through renewable sources. This tier allows applicants who are proposing Zero Net Energy projects to receive expedited permit review, a reduction in plan check fees, use of Program logo for marketing, and a Board of Supervisors commendation.

Challenges
• There was little support for a mandatory green building program.   o The mandatory program description was amended to become voluntary.

2.5.6   City of Simi Valley – Phase 2

Local Government Partnership: Simi Valley Partnership

Project Title: Develop Online Permitting Service

Project Purpose: The online permitting system will encourage customers to install energy efficiency measures by fast tracking those projects that include energy efficiency measures. It is expected the system will increase code compliance and increase energy efficiency measure adoption by offering the on-line permitting service.

Project Scope and Components: Implementer will develop an online permitting service, that will allow building, HVAC, plumbing and electrical permits to be submitted on-line. When the resident applies for the permit and if the project has a potential corresponding rebate, the permitting service will embed the SCE application onto the webpage for easy downloading by the resident.

      Deliverables:

1. Report on status of Implementer or Subcontractor to help support the Task
2. Assessment and planning report for the development of the on-line permitting service
3. Detailed specifications report for the on-line permitting service
4. Implementation report for the on-line permitting service
5. Report on marketing the on-line permitting system including statistics on the number of on-line permits submitted
6. Monthly status report

Date Approved (Advice Letter (NTP)): December 2011(December 2011)

Date Completed (est.): January 2013   **Date Completed (actual):** December 2013

Estimated Cost: $17,500   **Final Program Cost:** $611,356 ($389,500 Budget)

Local Match Contribution: $0

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

Program Budget Unspent: $0

Best Practices
• Promotion the various programs and services, and the types of permits offered.

Lessons Learned
• It is critical to involve the Building Official, Permit Services Coordinator, Fiscal staff and Information Services personnel in the development of an online permitting service site. Each Department has specific criteria that must be met in order to develop a service that is easy to use, meets all California Building Code requirements, does not exceed the ability of the existing online system and will not compromise the security of the Implementer's system. • The Building Official must be comfortable with the functioning of the site. • The Permit Services Coordinator was extremely helpful in identifying the various forms that need to be completed as part of the building permit approval process. • The software developer must have the ability to create a "back end" interface that can bridge an older application such as "Permits Plus" with a more robust program. The software should be adaptable to be able to function with new Community Development systems as well.

Knowledge Transferred
• This document serves as the primary mechanism of conveying best practices and lessons learned from this task. However, the implementer is available to discuss this further with any interested parties.

Next Steps
• The City Council had inquired about expanding the online services, particularly offering online permitting, as a way to present a convenient option for contractors to improve their working relationship with the Staff. This task was stalled due to lack of funding for a service that could use the Implementer's existing permitting system, or for purchase of a Community Development type comprehensive system update. At the same time, the City Council wanted to promote environmentally friendly practices. This Strategic Plan Task funding provided the impetus and direction needed to promote the Implementer's sustainability goals and meet a growing need from the business

community.

Benefit to the State

- The State will benefit from this online permitting program through increased code compliance, increased energy efficiency, and reductions in energy use and GHG emissions.

Benefit to Local Government

- Online permit system is live and city is tracking permit issuance counts and types. Positive feedback from development community and City Council.

- Facilitate compliance with Title 24 by introducing permit applicants to relevant incentives through an online permitting system.

Successes

- The online permitting service and site was developed by an outside contractor through the Implementer's Information Services division. The design of the system and site was based on building permit types that would be allowed as online permits by the Building Official, and would be appropriate targets for energy efficiency outreach. The service integrates energy efficiency information and links tailored to the applicant to easily apply for the available rebates based on permit type.

- Staff was trained on the new system.

- The online permit service is fully operational, and permits are being tracked.

Challenges

- Finding qualified vendor to perform task was a challenge that delayed the development of the service.

- The Implementer needed to create a new type of online permitting service to work with the existing permitting system as well as use the Implementer's existing online water bill payment system. Resources used for the process by CPI Solutions included other institutional programs developed for hospitals and universities, as well as staff familiarity with online retail experiences to develop a system that was very user-friendly and effective.

2.5.7   City of South Gate – Phase 1

Local Government Partnership: South Gate Partnership

Project Title: Develop Online Permitting

Project Purpose: Develop Online Permitting system and user interface that will facilitate code compliance by streamlining and making the issuance of building permits for qualifying energy efficiency projects more convenient, and promote the installation of energy efficiency equipment and measures.

Project Scope and Components: Implementer will award a contract to develop and implement a plan for the Online Permitting system and Web site. This plan will include all elements of development and implementation, technical specifications for the Online Permitting system and Web site. Online Permitting will be available to applicants for building permits, electrical permits, HVAC permits and plumbing permits from the Implementer. Online Permitting will be designed to enable automated identification of projects that may benefit from EE upgrades and those that are eligible for an SCE Rebate or Incentive.

> **Deliverables:**

1. Documentation of contract with Consultant or Subcontractor to support the Task
2. Draft Online Permitting Assessment and Planning Report
3. Final Online Permitting Assessment and Planning Report
4. Beta Online Permitting system and site
5. Live and fully functional Online Permitting system and site
6. Monthly report of tracked Performance Indicators

Date Approved (Advice Letter (NTP)): March 2011 (May 2011)

Date Completed (est.): March 2012   **Date Completed (actual):** April 2013

Estimated Cost: $62,500   **Final Program Cost:** $887,332 ($886,000 Budget)

Local Match Contribution: $0

Project Reimbursed for LG Staff Time: Y / N

Program Budget Unspent: $0

Best Practices

- Through the implementation of this task (Develop and Deploy Online Permitting) the following best practices were used as a guiding standard.

    o Identify operation requirements that are unique to your city's organization. Implementer's staff researched and identified an online permitting system that would fulfill the requirements of the program as well work with current municipal permitting operations.

    o Tie in energy efficiency. The online permitting system is utilized to encourage residents to install energy-efficient equipment and measures that exceed Title 24 standards. As part of the city's Voluntary Green Building Policy and Program, the online permitting system promotes energy efficiency in the community by streamlining and "fast tracking" permits for energy projects.

Lessons Learned

- Through implementation of this task the following lessons learned were acknowledged:

    o Non-typical application. Most online permitting systems do not offer an energy efficiency component to match the specific requirements of the funding program. This task called for encouraging energy efficiency through the use of an online permitting system. This required working with a system provider to develop a unique program not on their current list of offerings.

    o Many online permitting systems can only be modified and altered to a certain extent, tailoring a system to align with program requirements added additional cost to the program.

Knowledge Transferred

- Implementer streamlined their online permitting system and now educational energy efficiency information is provided to all residents, contractors and architects that undertake a construction project within the city.

Next Steps

- Continue to facilitate code compliance by streamlining and making the issuance of building permits for qualifying energy efficiency projects more convenient;

- Continue to promote the installation of energy efficiency equipment and measures by residents and businesses within the city by providing information on applicable utility rebates and incentives; and

- Integrate energy efficiency in the city's core municipal services, and continue allocate funding resources to educate city staff on the connection between code compliance,

building permitting, and energy efficiency.

Benefit to the State
• Local governments integrating energy efficiency in their municipal operations align with the state's "loading order" of first addressing energy efficiency as California's top priority resources.

Benefit to Local Government
• Through the implementation of the online permitting system, the city will increase energy efficiency awareness in the community. The result of this increased awareness will help reduce the energy consumption of residents and businesses.

Successes
• Implementer reviewed several online permitting services offered by peer municipalities, and the city evaluated best practices that were incorporated into the city's service. The city identified the developers of online permitting service and selected a vendor that created and launched the city's online permitting system.
• Implementation of the online permitting system increased energy efficiency awareness in the community at large.

Challenges
• Implementer found through its original research that online permitting software systems that actively promoted energy efficiency through its platform were not available. The city undertook the challenge of working tediously with one software developer to develop a unique system that fit the confines of the program.

2.5.8   Western Riverside Council of Governments – Phase 2

Local Government Partnership: Western Riverside Council of Governments Energy Leader Partnership

Participating Municipalities: Calimesa and Wildomar

Project Title: Develop and Implement an On-line Building Permitting Process for Participating Municipalities

Project Purpose: Through the development of an online permitting system, the Implementer and Participating Municipalities will promote energy efficiency "reach" activities through the online permit process. Through the permit system Participating Municipalities will communicate with contractors on energy efficiency "reach" opportunities. In addition, permit applicants will receive information on applicable energy efficient equipment, appliances and rebates.

Project Scope and Components: Implementer will procure and implement an energy efficiency project on-line building permit process to promote energy efficiency in new project permits within the jurisdictions of the Participating Municipalities.

> **Deliverables:**

1. Report on Status of Implementer or Subcontractor to Support the Task
2. Assessment and Planning Report for the On-Line Permitting System
3. Review Documents Developed During Program Implementation
4. Promotion Energy Efficiency in New Construction
5. Plan for Sharing Lessons Learned/Best Practices with Other Local Governments.
6. Submit Program that Promotes Energy Efficiency to City Council for Adoption
7. Monthly reports of tracked Performance Indicators

Date Approved (Advice Letter (NTP)): December 2011 (December 2011)

Date Completed (est.): Jun 2012   **Date Completed (actual):** Oct 2014

Estimated Cost: $291,135   **Final Program Cost:** $1,173,196 ($2,061,593 Budget)

Local Match Contribution: $0

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

Program Budget Unspent: $888,397

Best Practices
• One of the Participating Municipalities has provided training materials and training reports to their members so they can help promote the idea of energy efficiency.

Lessons Learned

- Determine the needs of your city – what do you need the permit system to do for you? As I mentioned previously, we chose our software mainly because it was compatible with our existing financial software. There are a lot of permit systems out there – be sure to research each company thoroughly.

- Take some time with your IT department to assess your existing software. Can your current server handle the new system? We found out the hard way that ours couldn't. We ended up having to purchase new servers and upgrade a few of our computer systems to accommodate the software and make it available online.

- Make sure to find out what kind of tech support is offered with your software. They will be your lifeline. Two good questions to ask are: "Does tech support or system maintenance cost extra?" And "Will you be limited to certain hours of operation for support?"

- Launching a new permit system is a nerve wracking experience! And of course, the first day was a nightmare of errors and issues. Our first permit – error. The first receipt – error! Our registers were messed up for four months just from that 1st day. By working closely with tech support and our own financial department, we finally got everything resolved and started preparing to go live online.

- The four biggest questions that we had when we were preparing for our Go Live were:

    o What permit should we start with?

    o What will the public be able to see?

    o How do we accept online payments?

    o What else can this thing do?

Knowledge Transferred

- One of the Participating Municipalities has provided their Online Permitting best practices to a number of cities in the Southern California Region due to outreach of this event.

Next Steps

- The Participating Municipalities are anticipating continued enhancement of Online Permitting capabilities. This includes the inclusion of additional permitting capabilities, plan submission, and even code enforcement.

Benefit to the State

- The State will benefit from this online permitting program through increased code compliance, increased energy efficiency, and reductions in energy use and GHG emissions.

- Implemented measure will aid with the reduction of greenhouse gas emissions (GHG's) such as AB 32.

Benefit to Local Government

- One of the Participating Municipalities. Installation of a digital kiosk to perform online permit walkthroughs for City residents and contractors. Educations of Online Permitting applicable building permits will reduce City staff time, promote energy efficiency, and streamline energy efficiency permit process, all while reducing the vehicles miles traveled offset by not needed to travel of City Hall.

- Projects with energy efficiency elements will be more attractive to builders by reducing the workload involved in permitting energy efficiency and streamlining permitting processes to speed the time that energy efficiency projects can be implemented.

Successes

- The Participating Municipalities participated in the On-line permitting task. Following a similar approach, the Participating Municipality #1 implemented and went 'live' with their system in later 2013, and the Participating Municipality #2 implemented and opened up for public use in October 2014.

- Participating Municipality #1:

    o Purchased and installed Eden permit solutions

    o Installation of server dedicated to Online Permitting to ensure the reliability of online usage.

- Participating Municipality #2:

    o Purchased and installation of EnerGOV online permitting software.

    o Installation of server dedicated to Online Permitting to ensure the reliability of online usage.

Challenges

- The biggest challenge to this task was the identification of how to synchronize the existing finance and/or building systems with the online permitting system to allow for streamlining of the work-flow and payment of permits/applications.

    o This resulted in a concern that an online permitting system might actually increase the time it takes to internally approve permits instead of streamlining the process.

2.6 Strategic Plan Task 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.

2.6.1 City of Beaumont – Phase 1

Local Government Partnership: Beaumont Partnership

Project Title: Develop Educational Program for Elected Officials & Staff

Project Purpose: Develop training programs for local elected officials, building officials, commissioners, and stakeholders to improve adoption of energy efficiency codes, ordinances, standards guidelines and programs

Project Scope and Components: Provide elected officials and other city officials the knowledge on lasting market transformation through the implementation of policies and programs that are designed to ensure market transformation, such as green building policies. This task will assist in educating key staff members and city officials creating an environment where building green becomes a normal method of doing business.

> **Deliverables:**

1. Assessment and Planning Report for the City Officials Educational Program
2. Draft for Plan City Officials Educational Program
3. Final Plan for City Officials Educational Program
4. Implementation Report
5. Report on Best Practices and Lessons Learned
6. Monthly report of tracked Performance Indicators

Date Approved (Advice Letter (NTP)): March 2011 (September 2011)

Date Completed (est.): February 2012   **Date Completed (actual):** November 2012

Estimated Cost: $10,000   **Final Program Cost:** $81,452 ($110,000 Budget)

Local Match Contribution: $0

Project Reimbursed for LG Staff Time: Y / N

Program Budget Unspent: $28,548

Best Practices
• Present successful "case studies" to elected officials before presenting a draft green building ordinance.
• Understand your local market, e.g., know what commercial and residential developers are doing to address EE requirements in their buildings.
• City councils and city managers are more interested in dollars saved and/or jobs created rather than kWh saved. Monetary savings and jobs are tangible and relatable.

Lessons Learned
• Generate "buy-in" from the community prior to presenting new programs/policies to the governing body for approval. The Implementer did not reach out to the general public, but took a more directed approach in reaching out to specific industry representatives and stakeholders, thus, there was some pushback from a specific industry that could have been countered by residents speaking in favor of energy efficiency programs.
• Assess the knowledge base of your elected officials prior to developing your curriculum. Implementer's City Council already had a great deal of knowledge on codes and standards through experience and could have used more advanced training on C&S.

Knowledge Transferred
• Engaging the public's opinions and getting their feedback would have been beneficial when presenting at City Councils for this policy adoption process.

Next Steps
• Continue to be available for any updated educational forums as technology fast changes and upcoming Title 24 changes.
• The Implementer completed a community Climate Action Plan (EE-CAP) in the 2013-2014 LGP Strategic Plan Pilot Program that incorporates the results of this task.

Benefit to the State
• The State benefits from this task through the decisions made by elected officials and

other key staff at the Participating Municipality. This training provided the attendees with information on the value of energy efficiency and action planning to the Participating Municipality and its constituents.

- This task helps the State meet AB 32 goal.

Benefit to Local Government
• Subsequent to the training of elected officials the Implementer adopted a Municipal Green Building Policy.

Successes
• City Council received a presentation from SCE's Codes and Standards Division on January 17, 2012 to inform the City Council, employees, and the public in attendance about the benefits of green building policies. In addition, members of the local Building Industry Alliance were also invited to attend and provide input. • The Implementer adopted a "policy" on green building for municipal projects as a first step in the process of adopting a green building ordinance in the future.

Challenges
• Scheduling all necessary official and staff to attend trainings was difficult. Adjustments to the program schedule had to be made to accommodate schedules.

2.6.2 Coachella Valley Association of Governments – Phase 1

Local Government Partnership: Desert Cities Partnership

Participating Municipalities: Blythe, Cathedral City, Desert Hot Springs, Indian Wells, Palm Springs, Rancho Mirage, and the Agua Caliente Band of Cahuilla Indians

Project Title: City Officials Educational Program

Project Purpose: Develop and implement an educational program targeted at local elected officials, city commissioners, and key city staff that will provide relevant information such that these officials will adopt policies that increase the impact building codes and related activities such as Energy Action Plans and Climate Action Plans.

Project Scope and Components: Educational Programs on energy efficiency and Sustainability for Local Jurisdiction Officials and City Staff: Implementer will develop and implement an educational campaign on energy efficiency and sustainability for local elected officials, city commission members, and city building officials ("City Officials Educational Program") for Participating Jurisdictions Workshops, speaker events, and educational programs for local elected officials and city commission members will help them understand Title 24, its value, the added value of reach codes, CSEEP goals and how reach codes will help achieve these goals.

The primary activities for this task can be characterized in two groups: (1) the education of jurisdictions' elected and appointed officials; and (2) the training of Building, Planning and Facilities Department staff members to facilitate the implementation of the Green Building Program.

The education of elected and appointed officials focused on individual and group meetings, including presentations made at Architectural Review boards and commissions, Sustainability Commission, Planning Commission and City Council meetings. The staff training component of this task was undertaken through a series of workshops where the Green Building Program and its implementation were explained in detail.

Deliverables:

1. Assessment and Planning Report for City Officials Educational Program
2. Draft Plan for City Officials Educational Program
3. Final Plan for City Officials Educational Program
4. Draft City Officials Educational Program materials (including participant surveys)
5. Final City Officials Educational Program materials (including participant surveys)
6. City Officials Educational Program Events (e.g., fora and workshops)
7. City Officials Educational Program Implementation Report
8. Draft report on task best practices and lessons learned
9. Final report on task best practices and lessons learned
10. Monthly report of tracked Performance Indicators

Date Approved (Advice Letter (NTP)): March 2011 (March 2011)

Date Completed (est.): Oct 2012   **Date Completed (actual):** Oct 2014

Estimated Cost: $470,660   **Final Program Cost:** $3,924,823 ($4,915,380 Budget)

Local Match Contribution: $0

Project Reimbursed for LG Staff Time: Y / N

Program Budget Unspent: $990,557

Best Practices
• One of the most successful tools we used for education and outreach among jurisdiction staff and city officials was a Green for Life open house at each of the cities. These open houses occurred during lunch hour, with informal stations featuring benchmarking, green building, climate action planning. These were very well attended and provided a great launch for the Green for Life program.   • We developed educational energy efficiency cards on topics including HVAC, windows, cool roofs that were available at city halls, and other public locations. Our education and outreach focused on training city staff be familiar with energy efficiency and green building options so they could encourage property owners to adopt these practices.   • A team of interns was brought on for the Green for Life program. They provided support for the Implementer team in community outreach, data gathering, and generated considerable enthusiasm and support for the program.   • We provided tools for property owners and contractors to learn about energy efficiency measures and help them understand the benefits of green building.   •

Lessons Learned

• The education of elected and appointed officials focused on individual and group meetings, including presentations made at Architectural Review boards and commissions, Sustainability Commission, Planning Commission and City Council meetings.
 	
      o Presentations at Planning Commissions, Architectural Boards and City Councils were the most effective way to reach out to public officials.
 	
      o Public officials believed that adopting the program was good for their city.
 	
      o Public officials were receptive to the Green Building Program if it was voluntary.
 	
      o Public officials were very concerned about the potential for economic impacts associated with the program.
 	
      o Meetings had to consider the convenience of the target audience. Initially, the trainings were going to be done for the region as a whole, but it was later

decided to arrange the meetings to be more closely clustered to ensure attendance of the target audience.

- The open houses held at the beginning of the program were extremely effective in raising awareness and support for Green for Life.

- Educational opportunities at the open houses were bolstered by the casual, 'energy fair' atmosphere created by the Implementer's team.

- The staff training component of this task was undertaken through a series of workshops where the Green Building Program and its implementation were explained in detail.

  o Staff was concerned with adding to their workloads.

  o Staff appreciated the handouts for questions raised by customers at the Building and Planning Department counters.

  o Staff training was most effective when it included a case study that demonstrated the program directly.

  o Jurisdictions had the option of selecting intensive one-day workshops or two half-day workshops.

Knowledge Transferred

- Through the Energy Leader Partnership, the Implementer has disseminated Green for Life program information to partners including the Coachella Valley Economic Partnership, Desert Valleys Builders Association, local water districts, and other local governments not served by SCE. We will continue to share information through our Green for Life website, articles in jurisdiction newsletters and websites, outreach events, presentations to community groups, and media/social media outreach.

Next Steps

- Ongoing outreach to the community to promote energy efficiency through the Green for Life program.

- Continue work with SCE and SoCalGas to encourage training and educational outreach (e.g. Title 24 workshops) opportunities for our region.

Benefit to the State

- The Green for Life program promotes collaborative effort of cities, counties, and JPAs to reduce energy use and encourage sustainability.

- Networking structure established which will facilitate dissemination of information about State issues and programs.

- Participating Municipalities became aware of the California Long Term Energy Efficiency Strategic Plan and the big and bold goals for the State through this task.

Benefit to Local Government

- Energy efficiency requirements can be met and individual city goals can be accomplished.

- Staff training and educational workshops were provided to staff and city officials with funding through the Green for Life program. These resources would have been difficult for cities to provide on their own.

Successes

- The program was designed to integrate long-term energy efficiency and climate action planning for our local governments with other elements of the Strategic Plan. A strategy was chosen that would bring together municipal energy efficiency tasks including benchmarking, commissioning/retro-commissioning, a utility management system, and energy action planning with sustainability programs -- green building and beyond Title 24 tasks as well as greenhouse gas inventories and climate action plans. These tasks were unified as a green government initiative with the Green for Life brand.

Challenges

- Logistics: Due limited time it was difficult to draw attendees to regional workshops and other educational events. Implementer focused on conducting training events for one city at a time.

2.6.3   City of Delano – Phase 1

Local Government Partnership: Kern County Partnership

Project Title: Develop and Implement Educational Programs for Local Elected Officials and City Staff

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

Project Scope and Components: The Implementer will develop and implement an educational program directed towards local elected officials, building officials, commissioners, and city staff to improve adoption of energy efficiency codes, ordinances, standards, and programs. This program will help ensure the adoption and implementation of reach codes and programs developed to achieve higher levels of energy efficiency.

> ### Deliverables:
>
> 1. Assessment and Planning Report for the City Officials Educational Program
> 2. Draft for Plan City Officials Educational Program
> 3. Final Plan for City Officials Educational Program
> 4. Implementation Report
> 5. Report on Best Practices and Lessons Learned
> 6. Monthly report of tracked Performance Indicators

Date Approved (Advice Letter (NTP)): March 2011 (August 2011)

Date Completed (est.): June 2012   **Date Completed (actual):** September 2013

Estimated Cost: $40,230   **Final Program Cost:** $324,549 ($379,500 Budget)

Local Match Contribution: $0

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

Program Budget Unspent: $133,951

Best Practices
• The participants appeared to be excited with the workshop interactions with those presenting the material, walking away from these sessions with an apparent positive sense of awareness. Most of those we spoke with agreed that a shift in the direction of sustainability was the correct vision for the Implementer.
• While everyone felt that energy efficiency is the correct direction of travel, no one wants to be mandated to do this. The reactions were of more unwanted government interference. Since people wanted energy efficiency, those in the jurisdictions having authority need to lead the way in education of giving positive direction to the constituents who look to them to lead the way by example for how the general populations should invest in their future. Community workshops in assisting homeowners would be more effective than added regulations.

Lessons Learned
• Sustainability concepts are accepted until the individual is impacted. The public needs to be encouraged that positive change starts with each individual. • Civic leaders need to educate, encourage and empower the community to work together to enhance the quality of environmental living within our own community. • One size does not fit all. Complex issues require the ability to present what needs to be accomplished in a manner that can be tailored to address the diverse audiences. • Many decisions continue to be based on financial concerns and economic impact.

Knowledge Transferred
• This document serves as the primary mechanism of conveying best practices and lessons learned from this task. However, the implementer is available to discuss this further with any interested parties.

Next Steps
• As a result of Workshop #2, a link to the Tulare Energy Education Center website is now included on the local Adult School website.

Benefit to the State
• The State benefits from this task through the decisions made by elected officials and other key staff at the Participating Municipality. This training provided the attendees with information on the value of energy efficiency and action planning to the Participating Municipality and its constituents.

Benefit to Local Government
• At Workshop #1 the City Council and the Planning Commission learned about the Implementer's energy efficiency goals, current efforts, and opportunities for improving energy efficiency. • Workshop #2 provided a forum for educators to discuss discussion regarding the need, level of interest, and timeframe for developing an education curriculum for energy efficiency • Attendees of the four presentations learned about resources at SCE's Tulare Energy Education Center (EEC), and about the energy conservation technology and programs available through SCE and the EEC. Others learned about lighting fundamentals and ways to improve commercial energy efficiency:

Successes
• Two municipal stakeholder engagement workshops were conducted in September and November 2012 and four demonstrations and/or presentations were conducted in June, August, October 2012 and April 2013.

Challenges
• Maximizing attendance from Staff, program directors and elected officials at the educational workshops and presentations was a challenge.   o Implementer was successful in getting key individuals to attend through personalized communication and invitations. This method was more effective than posting flyers and making announcements on public media. • The perception that sustainability and/or energy efficiency are worthwhile to pursue, but the public shouldn't be inconvenienced or be required to pay additional.

2.6.4   City of El Segundo – Phase 1

Local Government Partnership: South Bay Partnership

Project Title: Energy Efficiency Educational Programs for Local Government Officials

Project Purpose: The Implementer's specific goal for this task is to develop education programs for local elected officials, commissioners, and stakeholders to improve adoption of energy efficiency codes, ordinances, standards, guidelines and programs that support increased energy efficiency.

Project Scope and Components: Implementer will assess the energy efficiency needs for local elected officials and commissions, and identify potential energy efficiency training topics. Implementer will survey existing energy efficiency training provided by SCE, the State of California, and non-governmental organizations and identify any topics not being covered by the existing training providers. An implementation plan including a list of targeted attendees, workshop topics, and an initial schedule of training events will be developed.

    Deliverables:

1. Assessment and planning report for energy efficiency educational programs

2. Implementation report for energy efficiency educational programs

3. Monthly status report

Date Approved (Advice Letter (NTP)): March 2011 (April 2011)

Date Completed (est.): September 2012   **Date Completed (actual):** January 2013

Estimated Cost: $36,500   **Final Program Cost:** $454,153 (486,500 Budget)

Local Match Contribution: $0

Project Reimbursed for LG Staff Time: Ⓨ / N

Program Budget Unspent: $32,347

Best Practices

• Through the implementation of this task (development of an Energy Efficiency Educational Program) the following best practices were used as a guiding standard.
 	
   o Present information that is easy to understand, current and is relevant to the city's current energy goals and tie how that is pertinent to the state's goals.
 	
   o Stress the importance of active community involvement in energy efficiency.

Lessons Learned

• Through the implementation of this task the following lessons learned where documented:
 	
   o Know your audience. The varying degrees of knowledge between elected officials, planning staff and departmental staff varies. Your educational program should be tailored to speak to their varying knowledge. If the city had not first conducted a survey for desired topics this may not have been known.
 	
   o Bring outside expertise. Identifying key municipal leaders from other organizations that could help promote energy efficiency through experience and firsthand knowledge were vital to the success of the program.

Knowledge Transferred
• The energy efficiency educational program provided important knowledge to City stakeholders to ensure proficiency in topics such as energy efficiency, code compliance, equipment retrofits, utility programs, greenhouse gases and AB 32 that was not known before the program.

Next Steps
• Leverage the knowledge key decision makers have now gained through the energy efficiency educational program in order to continue to seek approval and support for energy efficiency projects that will assist the city in meeting their long-term energy reductions goals.

Benefit to the State
• Local governments integrating energy efficiency in their municipal operations align with the state's "loading order" of first addressing energy efficiency as California's top priority resources.

Benefit to Local Government
• City Council members, mayor and senior city staff are better informed of the Implementer's energy goals and program objectives, as well as, statewide and local efforts to improve adoption of energy efficiency codes, ordinances, standards, and guidelines supporting the CEESP goals and strategies

Successes

• The Implementer conducted two workshops directed to elected officials and key Staff.
 	
    o The first of the two workshops was conducted in December 2011. Hector Brolo was the speaker for the workshop and gave an in-depth presentation that covered the requirements and objectives of the Strategic Plan program that has been awarded to the Implementer. Topics included the importance of energy efficiency, a look at the three goals of the Strategic Plan, as well as several ideas, programs and initiatives for the Implementer to consider for implementation. The online permitting system which will be implemented by April 2012 was also reviewed in depth. Handouts were provided on the LEED building certification process, as well as the many resources available to local governments and communities through the EPA's Energy Star website. Participants were invited to and did ask questions throughout the program.
 	
    o The second Energy-Efficiency Workshop was held in October 2012 and informed City Council of available resources that help local governments achieve their energy efficiency goals and provided an overview of the Strategic Plan's accomplishments, including the implementation of the new online permitting system. In addition, the workshop focused in on the policies developed through the Strategic Plan Program, including the retro-commissioning policy and Energy Action Plan. City Council was to vote on these policies in the shortly following the workshop, so examples were used to

explain the benefits of such policies. Patrick Stoner, Statewide EE Coordinator, started the workshop by describing the key players in the energy industry and those that serve as resources for local governments. He also discussed financing services and provided case studies of cities' best practices that utilized such services. In addition, he referenced critical publications and tools that guide cities in their effort to become environmentally sustainable. Council members asked various questions related to topics discussed throughout the presentation, allowing Pat to elaborate on his expertise of the energy industry at it relates to municipalities.

Challenges

- The biggest challenge for this task was gathering all targeted audience where the workshop did not interfere with other commitments.

2.6.5   City of Goleta – Phase 1

Local Government Partnership: South Santa Barbara Partnership

Project Title: Develop and Deliver an Energy Efficiency Action Plan Training Program to Community Leaders

Project Purpose: This program would bring together leaders from the government sector in a seminar format and provide them with current information, tools, and a resource template from which to develop an Energy Efficiency Action Plan. Providing participants with this information and resources to develop energy efficiency policies and an Energy Efficiency Action Plan for their organizations will improve the likelihood that energy efficiency development or redevelopment which exceeds existing regulations (Title 24) will be approved by City Council.

Project Scope and Components: Develop and Deliver an Energy Efficiency Action Plan Training Program (EEAP) to Community Leaders. The staff collaboratively developed the EEAP Training curriculum, including three training modules and one group charrette/Symposium on Energy Efficiency Actions. Three training modules & Symposium were delivered to government officials, community leaders & decision-makers from various special districts.

   Deliverables:

1. EEAP Training Program Assessment and Planning report; identify key provisions of an EEAP and ideal policies

2. Draft EEAP training curriculum and document templates available; submit for CPM review and comment

3. Final EEAP training curriculum and document templates available

4. Deliver Energy Action Plan Training course to community officials

5. Complete EEAP course evaluation, and update, as needed, to improve course delivery

6. Report on Best Practices and Lessons Learned

7. Monthly report of tracked Performance Indicators.

Date Approved (Advice Letter (NTP)): March 2011 (April 2011)

Date Completed (est.): October 2012   **Date Completed (actual):** October 2012

Estimated Cost: $94,746   **Final Program Cost:** $349,290 ($358,370 Budget)

Local Match Contribution: $0

Project Reimbursed for LG Staff Time: Ⓨ / N

Program Budget Unspent: $9,080

Best Practices
Logistics

- Regarding solicitation, emails and phone calls were the best ways to guarantee attendance. Flyers were also distributed, and a follow-up phone call to confirm receipt and attendance were critical.

- A single point of contact was important to minimize confusion when coordinating and receiving RSVPs from attendees.

- Utilize "Lunch and learn": shorter training seminars scheduled between 11 a.m. and 2 p.m. that included the complimentary lunch and networking opportunities when possible.

- Module 1 (Overview of EEAP): Many participants were engaged by the examples of successful implementation of energy efficiency actions. Many participants inquired about a wide range of cost data for energy efficiency actions, potential cost savings in energy, and return on investment information.

- Module 2 (EEAP Development): benchmarking methods/tools introduced in this training module were "most feasible"

- Module 3 (Strategies, Assessment and Enhancement for EE Actions): "Charrette

dialogue" format over "lecture/ presentation" format

Program Topics

- Use real life examples of energy efficiency actions and results.

- Cost data and return on investment evaluations (ROI calculations were required to convince participants of the feasibility of the program).

- Most up-to-date research data of energy efficiency technologies (such as lighting, controls, etc.).

- "Charette dialogue" format over "lecture/présentation" format.

Lessons Learned

- A key lesson was to keep the training seminars short (two hours or less); the shorter classroom time and small breakout group session promoted group interaction to share ideas and experiences.

- The success of the training seminars was also attributable to the team's flexibility in making necessary adjustments in programming.

- "Lunch and Learn": shorter training seminars scheduled between 11am-2pm that included the complimentary lunch and networking opportunities

- The participant surveys indicated the following:

    o Indicated that the ideas in the presentation were helpful in evaluating energy efficiency actions

    o Many participants indicated that these programs/actions were difficult to implement immediately

    o Most participants indicated interest for energy efficiency actions which had potential for quick/high rate of return on investment

    o Most participants indicated that they were most likely to implement energy efficiency developments/actions which required small capital investments.

    o Participants from agencies that participated in grant programs were more interested and likely to implement energy efficiency actions with longer payback periods.

Knowledge Transferred

- This document serves as the primary mechanism of conveying best practices and lessons learned from this task. However, the implementer is available to discuss this further with any interested parties.

Next Steps
• The Implementer will develop a neighborhood development floating zone to foster green community development through the 2013-2014 LGP Strategic Plan Pilot Program.

Benefit to the State
• The State benefits from this task through the decisions made by elected officials and other key staff at the Participating Municipality. This training provided the attendees with information on the value of energy efficiency and action planning to the Participating Municipality and its constituents.

Benefit to Local Government
• The local government benefits from this task through the decisions made by elected officials and other key staff at the Participating Municipality. This training provided the attendees with information on the value of energy efficiency and action planning to the Participating Municipality and its constituents.

Successes

• The EEAP Training Programs and Symposium accomplished the program goal of developing an informed group of government officials with the knowledge and tools to foster long term energy efficiency changes.
 	
 o Attendees received the most up-to-date information regarding energy efficiency technologies, cost data, return on investment data, etc. was provided by the presenters and Symposium panelists. Tools and resources were provided along with the presentations. Three modules were implemented:
 	
  ▪ Module 1: Overview of Energy Efficiency Action Plan
 	
  ▪ Module 2: EEAP Development
 	
  ▪ Module 3: Strategies, Assessments and Enhancements
 	
• An EEAP Training Program & Templates (with samples and resources) was completed and replicable. However, some modifications will be needed for different audiences in various locations, as the information, data and resources may not be applicable to other locations. Additionally, resources such as rebates and other programs have expiration dates and must be updated. The cost data are applicable to 2012 and will need to be updated as necessary.
 	
• The EEAP Training Program effectively demonstrated long term benefits (such as cost savings and environmental benefits). In the Post Course Surveys and EEAP Activity Results of the Training Programs, participants indicated the following:

o 94% found the training program to be helpful in developing their own EEAP;

o 83% indicated that they were satisfied with the training;

o 80% indicated that the ideas in the presentation were helpful in evaluating energy efficiency actions for their organization;

o 60% indicated that they were more likely to develop and implement an EEAP with the information provided in the training; and

o 100% of participants indicated that the Symposium discussions were helpful in developing an EEAP.

Challenges
• Initial interest from City Council for participation in the EE Educational Program was minimal due to the content of the first session/module.

o The City focused its attention in selecting well informed speakers and covering topics important to local government agencies for subsequent presentations.

o The subsequent array of speakers was able to improve the learning experience of the participants.

2.6.6   City of San Bernardino – Phase 2

Local Government Partnership: Community Energy Partnership

Project Title: Develop and Deliver Stakeholder Education Program

Project Purpose: The goal of this task was to educate Implementer's City Council, Planning Commissioners, and the Sustainability Master Plan (SMP) task force about the Implementer's efforts to develop and implement an Energy Efficiency Strategic Plan to align itself with the California Long-term Energy Efficiency Strategic Plan (CEESP) and that encourage and accelerate the development and adoption of energy efficiency projects.

Project Scope and Components: Implementer will plan and deliver energy efficiency workshops for elected officials, building commissioners, planning officials, and other city employees for the purposes of promoting the implementation of programs and policies that encourage and accelerate the development and adoption of energy efficiency projects.

   Deliverables:

1. Report on status of Implementer or Subcontractor to support the task

2. Assessment and planning report for hosting a regional energy efficiency summit

3. Energy efficiency summit implementation

4. Assess value and benefits of the energy efficiency summit

5. Plan for sharing lessons learned/best practices with other local governments

6. Deliver Monthly reports from tracking system

Date Approved (Advice Letter (NTP)): March 2011 (January 2012)

Date Completed (est.): January 2013   **Date Completed (actual):** September 2012

Estimated Cost: $68,000   **Final Program Cost:** $258,468 ($512,620 Budget)

Local Match Contribution: $0

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

Program Budget Unspent: $254,152

Best Practices
• The Implementer will make every effort to share Lessons Learned and Best Practices of the Implementer's Stakeholder Energy Efficiency Education Program. The plan for sharing Lessons Learned and Best Practices will include the following:
• Allow Southern California Edison to share with other cities the Assessment and Planning and the Lessons Learned and Best Practices Reports of the Implementer's Stakeholder Energy Efficiency Education Program
• Take opportunities during peer meetings with other cities to share Lessons Learned and Best Practices of the Stakeholder Energy Efficiency Education Program
• Identify regional associations such as the San Bernardino Associated Governments (SANBAG), the council of governments and transportation planning agency for San Bernardino County, to partner with and share information on energy efficiency programs.

Lessons Learned
• **Attendance Did Not Meet Expectations.** Despite multiple invitations, one-on-one conversations, group announcements and even some RSVPs with key stakeholders such as the seven city councilmembers and 10 planning commissioners, attendance from this group was minimal. An option to increase attendance might be for the time commitment to be shortened in which the information can be shared during a two-hour window presentation in the evening.

- **Create an Engaging Environment** – Creating an environment that fosters dialogue is key to getting stakeholders engaged. The hands-on approach with the tour stops that allowed stakeholders to interact with program administrators and the end-user brought forth another level of understanding of what the city is currently doing with energy efficiencies, and why and how it ties to a much bigger picture of sustainability. When possible, try to identify show and tell opportunities that are visual as they will help create a lasting impression of the key messages.

- **Expert Resources** – Finding expert resources that demonstrate passion and commitment to energy efficiency, conservation and resourcefulness is key to gaining stakeholder support. While some presentations were longer than expected and it will be important to have an opportunity to review all presentations beforehand for the length, the information was excellent and the experts delivered information in a passionate way that was relevant and resonated with the attendees. Furthermore, the experts served as great role models as they are committed to these lifestyle choices.

- **Thinking Outside the Box** – Early on it was determined that given the political landscape of the city, a stakeholder education effort of this type could face opposition or lack of support. To gain basic acceptance, it would be important to feature successes across the city in various wards to garner support from the respective city councilmember representative. The planning committee took a look outside of the box and came up with a different approach to the standard workshop in a meeting room setting. Based on survey results, the tour and summit approach was well received.

Knowledge Transferred

- Program Summaries Describing Energy Efficiency Projects Done Within the City Were Part of the Educational Package. The program summaries developed for each of the energy efficiency programs highlighted on the tour stops provided a context for energy efficiency activities in the City. The program summaries provided a program overview as well as identification of the mission or program objectives and a financial/quantitative analysis, when appropriate. The program summaries served to reinforce key messages of energy efficiency objectives and sustainability that were presented by experienced City Staff and industry experts at each of the tour stops. The binders also included resource/contact information for people to use to continue the exchange of ideas on energy efficiency.

Next Steps

- There are no Strategic Plan activities currently planned for the City of San Bernardino. However, the City of San Bernardino will continue to pursue Strategic Plan activities through the Community Energy Leader Partnership.

Benefit to the State

- The State benefits from this task through the decisions made by elected officials and other key staff at the Participating Municipality. This training provided the attendees with information on the value of energy efficiency and action planning to the Participating Municipality and its constituents.

Benefit to Local Government
• The local government benefits from this task through the decisions made by elected officials and other key staff at the Participating Municipality. This training provided the attendees with information on the value of energy efficiency and action planning to the Participating Municipality and its constituents.

Successes
• A half-day Energy Efficiency Education Summit was on June 22, 2012. In support of the educational program, City Council members were invited to participate in the summit which showcased current sustainability efforts in the city leading up to the educational program informing them about energy efficiency efforts being undertaken by the Implementer. Members of Planning Commission and the SMP task force were also invited to participate in the summit along with city staff playing key roles in implementing program elements.

Challenges
• Despite multiple invitations, one-on-one conversations, group announcements and even some RSVPs with key stakeholders such as the seven city councilmembers and 10 planning commissioners, attendance from this group was minimal. An option to increase attendance might be for the time commitment to be shortened in which the information can be shared during a two-hour window presentation in the evening.

2.6.7   South Bay Cities Council of Governments – Phase 1

Local Government Partnership: South Bay Partnership

Participating Municipalities: Carson, El Segundo, Gardena, Hawthorne, Hermosa Beach, Inglewood, Lawndale, Lomita, Manhattan Beach, Palos Verdes Estates, Rancho Palos Verdes, Redondo Beach, Rolling Hills, Rolling Hills Estates, and Torrance

Project Title: Training for City Officials: Curriculum Development

Project Purpose: To develop a Training Curriculum for city officials that will lead them to favorable decisions on policies and programs that improve energy efficiency. The program will emphasize:

- The importance of energy efficiency, other energy management actions;
- Current building and code enforcement standards and the differences and benefits of reach codes; and
- The effectiveness of permitting and code enforcement to improve adoption of energy efficiency measures by the community.

Project Scope and Components: The Implementer will develop a curriculum for a training module that will be delivered to Participating Municipalities that provides training for elected officials, building officials, planning commissioners, and other city employees who deal with the public regarding building planning and code compliance issues. This task provided the curriculum development for delivering training to local elected officials, building officials, commissioners, and stakeholders to improve adoption of energy efficiency codes, ordinances, standards, guidelines, and programs. This task devised the curriculum format and resources necessary for SP Task 2.1.1 course delivery to increase expertise among workshop participants. Curriculum development occurred through evaluation of existing codes workshops from:

- Statewide investor-owned utilities' Codes and Standards Program,
- Southern California Edison (SCE),
- California Energy Commission (CEC),
- California Building Officials (CALBO),
- United States Green Building Council (USGBC),
- Build It Green,
- Institute for Local Governments (ILG),
- International Council for Local Environmental Initiatives (ICLEI),
- Statewide Energy Efficiency Collaborative (SEEC),
- Los Angeles County,
- Building Owners and Managers Association (BOMA),
- Association of Energy Engineers, and
- Institute of Heating and Air Conditioning Industries, Inc. (IHACI).

Deliverables:

1. Report on status of Subcontractor to support the task

2. Code Compliance Training Program Assessment Report and Training Plan Review and evaluate existing statewide building code training programs offered by IOUs; identify gaps and enhancement opportunities.

3. Host initial workshop with SCE and others to assure proper educational content and Program direction

4. Develop draft three-part training curriculum and submit to SCE for review and comment

5. Circulate draft training curriculum for review by SCE and industry stakeholders and other experts

6. Prepare final draft of training curriculum and submit to SCE for review and approval/comment

Date Approved (Advice Letter (NTP)): March 2011 (March 2011)

Date Completed (est.): Sep 2011   **Date Completed (actual):** May 2012

Estimated Cost: $22,430   **Final Program Cost:** $1,003,190 ($900,480 Budget)

Local Match Contribution: $0

Project Reimbursed for LG Staff Time: Y / N

Program Budget Unspent: $0

Best Practices
• Review and assess existing educational/training programs offered by state, utility, and NGOs. Develop training program based on information gained and gaps identified through existing training.

Lessons Learned
• Focus on the preferences of each Participating Municipality to ensure city staff attendance and the trainings meet the needs of each Municipality's unique jurisdictional needs

Knowledge Transferred
• The knowledge transferred occurred during the actual training that occurred with the

participating municipalities as part of Strategic Plan Task 2.1.1. Participating municipalities received information as knowledge transfer from existing training programs to use in their municipalities.

Next Steps

- Continue additional funding for Participating Municipalities in next funding cycle. Participating municipalities have requested the Association of Energy Engineers' Certified Energy Manager (AEE CEM) training. Recently, the AEE CEM became accredited under the ANSI/ISO/IEC Standard 17024 for Personnel Certification Bodies and is the gold standard in the energy industry for professional certification in energy management.

- Three of the top five energy use cities in the South Bay Local Government Partnership have directly requested Certified Energy Manager (CEM) training in the past year.

Benefit to the State

- The State benefits from this task through the decisions made by elected officials and other key staff at the Participating Municipality. This training provided the attendees with information on the value of energy efficiency and action planning to the Participating Municipality and its constituents.

- A trained workforce to ensure implementation of California's flow-down policies including AB 32 and CA Loading Order.

Benefit to Local Government

- A trained workforce to ensure implementation of California's flow-down policies including AB 32 and CA Loading Order. Provide funding through ratepayers to meet state of California's ambitious energy goals with a trained energy workforce in local government due to specialized nature.

Successes

- The Implementer developed a curriculum for a training module that will be delivered to Participating Municipalities that provides training for elected officials, building officials, planning commissioners, and other city employees who deal with the public regarding building planning and code compliance issues.

Challenges

- A challenge encountered with this task was receiving feedback from cities about

> preference in types and mode of conducting the trainings.

2.6.8   City of South Gate – Phase 1

Local Government Partnership: South Gate Partnership

Project Title: Energy Efficiency Education for Local Stakeholders

Project Purpose: The purpose of the Stakeholder Education Implementation Program was to develop an educational program for local elected officials, building officials, commissioners, and stakeholders to improve adoption of energy efficiency codes, ordinances, standards, guidelines and programs. The educational program primarily focused on providing a workshop for elected officials, city management, department leads, and other key staff because they are best positioned to influence city-wide changes

Project Scope and Components: Implementer will develop and implement an EE Stakeholder Education Program (Program) with targets including local elected officials and city commission members. The Program will address the benefits of EE, effects on GHG emissions, goals of the CPUC, and importance of active community involvement in EE efforts. The format and materials will be tailored for each of the stakeholder audiences, and will include a mix of in-person, online workshops or classes, and on-site/hands-on events such as tours of the Plan Check Counter, pre-sale property inspections, and audits of municipal buildings.

Deliverables:

1. Draft Stakeholder Education Program Assessment and Planning Report
2. Final Stakeholder Education Program Assessment and Planning Report
3. Draft Stakeholder Education Program curriculum and materials, including participant feedback surveys and promotional materials
4. Final Stakeholder Education Program curriculum and materials, including participant feedback surveys and promotional materials
5. Stakeholder Education Program Implementation Report
6. Draft model for sharing best practices and lessons learned with other local governments
7. Final model for sharing best practices and lessons learned with other local governments
8. Monthly report of tracked Performance Indicators

Date Approved (Advice Letter (NTP)): March 2011 (May 2011)

Date Completed (est.): October 2012   **Date Completed (actual):** August 2013

Estimated Cost: $84,200   **Final Program Cost:** $887,332 ($886,000 Budget)

Local Match Contribution: $0

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

Program Budget Unspent: $0

Best Practices
- Logistical issues. Implementer's officials' schedules are quite varied, requiring thorough coordination to encourage maximum attendance.   - The duration of the workshop was confined to one hour and a half so as to minimize the time commitment from participants yet with sufficient time to review key concepts. In addition, holding the workshop on-site (i.e., City Hall) facilitated attendance. The workshop was held as a Special Meeting to encourage attendance from all council members and other key staff.   - Continuing education Stakeholders will likely need to consider pursing continuing education to gain a proficient understanding of energy efficiency and to obtain new information that arises within the industry (e.g., emerging technology, renewable energy, financing programs, and new local resources to support municipalities).   - Maintaining a market demand for energy efficiency policies Interest in energy reduction solutions from City Council's constituency is important in creating the necessary market demand that will continue to encourage city decision-makers to deliver energy efficiency programs and services to the community.   **Carefully designed a program to meet the interests of the audience.** A carefully crafted curriculum was vital to producing a workshop that captured the audience's interest. First, an assessment of existing programs and resources found specific energy efficiency and sustainability topics that would be important to introduce to city officials. Second, the targeted audience filled out pre-workshop surveys to capture topics of interest and gauge their existing level of expertise in energy-efficiency. The curriculum was developed and tailored to provide important general efficiency information as well as specific topics of interest to the city.   **Selected expert speakers to lead workshop.** The workshop presenters were selected based on their extensive experience and expertise with local government. Howard Choy and Patrick Stoner were specifically targeted because of their credibility and influence in the industry. Both presenters made notable efforts to attend the workshop. The speakers related the workshop topics to the Implementer's energy goals and interests.

Lessons Learned
• Strategically coordinated the workshop to facilitate attendance of City Council members, department directors, and key staff. The duration of the workshop was confined to one hour and a half so as to minimize the time commitment from participants yet with sufficient time to review key concepts. In addition, holding the workshop on-site (i.e., City Hall) facilitated attendance. The workshop was held as a Special Meeting to encourage attendance from all council members and other key staff. • Carefully designed a program to meet the interests of the audience. A carefully crafted curriculum was vital to producing a workshop that captured the audience's interest. First, an assessment of existing programs and resources found specific energy efficiency and sustainability topics that would be important to introduce to City officials. Second, the targeted audience filled out pre-workshop surveys to capture topics of interest and gauge their existing level of expertise in energy-efficiency. The curriculum was developed and tailored to provide important general efficiency information as well as specific topics of interest to the city.

Knowledge Transferred

• The Implementer's Stakeholder Education Program's best practices and lessons learned can use various platforms to disseminate such experiences with other local governments to help them develop effective energy efficiency plans. Additional information to be shared with local governments may include the following:
 	
    o Assessment and Planning Report
    o Marketing collateral
    o Pre- and post-surveys templates
    o Training curriculum
    o PowerPoint presentation slides
 	
• Implementer will share information with cities participating in Southern California Edison's (SCE) Energy Leader Partnership program through SCE's peer meetings and newsletter. Furthermore, Implementer can reach numerous local governments that are not part of SCE's Partnerships through organizations such as the Gateway Council of Governments, the National League of Cities, and the California Contract Cities Association, which are ideal organizations that can serve as effective platforms to share such information with municipalities that are exposed to similar obstacles and opportunities encountered by Implementer.

Next Steps
• Staff is considering the development of providing a regular report of energy related activities to city council.

Benefit to the State
• The State benefits from this task through the decisions made by elected officials and other key staff at the Participating Municipality. This training provided the attendees with information on the value of energy efficiency and action planning to the Participating Municipality and its constituents.

Benefit to Local Government
• The local government benefits from this task through the decisions made by elected officials and other key staff at the Participating Municipality. This training provided the attendees with information on the value of energy efficiency and action planning to the Participating Municipality and its constituents.

Successes
• A customized energy efficiency and sustainability program was developed for the Implementer based on responses to a pre-workshop survey. • The program included Patrick Stoner (LGC) and Howard Choy (County of LA) as presenters. • All five (5) City Council members, City Manager, and department directors attended. • The results of the post-workshop surveys were positive.

Challenges
• Originally, there were up to 3 workshops planned. Due to time constraints for City Council members, the 3 workshops were consolidated into one workshop which was well received by all five City Council members, city management (e.g., City Manager and assistant to City Manager), and four department directors.

2.6.9   County of Ventura – Phase 1

Local Government Partnership: Ventura County Partnership

Project Title: Develop and Implement an Energy Efficiency Educational Training Program to Support the EECAP

Project Purpose: The goal of this task is to develop and conduct an educational program for elected officials and key staff to help them understand the reasons why policy and operational changes need to occur to stimulate the implementation of and increase the effectiveness of the energy efficiency programs completed at county facilities.

Project Scope and Components: Implementer will develop and implement energy efficiency education programs targeted at elected Implementer officials and key Implementer staff to increase understanding and awareness of energy efficiency issues and opportunities to improve the energy efficiency of county facilities.

Deliverables:

1. Assessment and Planning Report of EEAP Training Programs; identify key provisions of an EEAP and ideal policies

2. Draft EEAP training curriculum and document templates available; submit for CPM review and comment

3. Final EEAP training curriculum and document templates available

4. Deliver Energy Action Plan Training course to county officials

5. Complete EEAP course evaluation, and update, as needed, to improve course delivery

6. Report on Best Practices and Lessons Learned

7. Monthly report of tracked Performance Indicators.

Date Approved (Advice Letter (NTP)): March 2011 (May 2011)

Date Completed (est.): Oct 2012   **Date Completed (actual):** Sep 2013

Estimated Cost: $280,000   **Final Program Cost:** $1,001,068 ($1,000,000 Budget)

Local Match Contribution: $0

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

Program Budget Unspent: $0

Best Practices
• Make program fun and informative that inspires action and will span different offices/cultures.
• Identify clear, measurable metrics of success.

- Don't tackle every issue at once. Sometimes focusing on just one action works best.

- Constant Feedback- create a way for employees to know how they are doing and how others are doing.

- Clear goals: % participation, energy saved, dollars saved, all options.

- Other elements to report: % complete, # of people, # of actions, team score.

- Profiles: Create individual or team profiles where they can learn from each other.

Lessons Learned

- Have a Clear Call to Action: The Implementer was clear it wanted to focus on reducing carbon emissions and waste, but when it came time to identify which actions employees had control over, it was a bit more challenging to clearly identify the most effective call to action. As we engaged key stakeholders and reviewed existing programs, three key priorities emerged:

  o To cut vampire energy use

  o To increase recycling and reduce waste

  o To promote use of the County green fleet (with cleaner and more fuel-efficient vehicles).

Knowledge Transferred

- New sustainability employee engagement strategies

- These will continue to serve as the platform for educating County staff on energy efficient measures and overall sustainability efforts.

Next Steps

- Continue to use developed tools so that the county employees and community are aware of all energy efficiency practices.

Benefit to the State

- Local government employees who are aware of energy efficient practices at work and can take the knowledge home and to their community and also implement these best practices.

Benefit to Local Government

- For Implementer's operations, the anticipated end result will be reduced energy use at Implementer's facilities and will assist the Implementer in striving to meet its goal.

- Educating decision makers on energy efficiency will help make energy efficiency projects a supported and common practice

- The design and launch of a new sustainability employee engagement strategy including tools such as a sustainability website, video and web-based engagement tool. These tools will continue to serve as the platform for educating Implementer's staff on energy efficient measures and overall sustainability efforts.

Successes

- Developed and implemented energy efficiency educational training programs

- Implementer staff attended various trainings in relation to energy efficiency as well as developed a sustainable website, video, and employee engagement tool.

Challenges

- Hiring a local consultant to meet the Implementer's needs for this task consumed more time than originally thought.

- Stakeholder participation as well as behavioral changes posed to be more challenging than anticipated.

2.6.10   Western Riverside Council of Governments – Phase 2

Participating Municipalities: Calimesa, Canyon Lake, Hemet, Lake Elsinore, Menifee, Murrieta, Norco, Perris, San Jacinto, Temecula, and Wildomar

Project Title: Regional Energy Efficiency Summit for Participating Municipalities

Project Purpose: The Implementer will develop and conduct an educational program for local elected officials, city commissioners, and building officials, key decision makers in reach code adoption. By educating these targets on the value of reach codes in GHG reduction strategies, it will increase the likelihood that the key decision makers will adopt reach codes and policies promoting reach codes.

Project Scope and Components: Implementer will plan, promote, and host a one-day regional energy efficiency summit for key decision makers (elected officials, building officials,

and commissioners) of the Participating Municipalities for the purposes of promoting the implementation of programs and policies that encourage and accelerate the development of codes and standards, ordinances and policies that increase energy efficiency throughout the Implementer's region.

Deliverables:

1. Report on Status of Implementer or Subcontractor to Support the Task
2. Assessment and Planning Report for Hosting a Regional Energy Efficiency Summit
3. Energy Efficiency Summit Implementation
4. Assess Value and Benefits of the Energy Efficiency Summit
5. Plan for Sharing Lessons Learned/Best Practices With Other Local Governments
6. Deliver Monthly reports from tracking system

Date Approved (Advice Letter (NTP)): December 2011 (December 2011)

Date Completed (est.): Dec 2012 **Date Completed (actual):** Mar 2013

Estimated Cost: $110,915   **Final Program Cost:** $1,173,196 ($2,061,593 Budget)

Local Match Contribution: $0

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

Program Budget Unspent: $888,397

Best Practices
• Implementer hosted a centrally located 2013 Energy Summit at the City of Temecula. The 2013 Energy Summit consisted of multiple facets of energy efficiency including: regional best practices, energy efficiency financing opportunities, upcoming building code changes relevant to jurisdictional staff, and a wide range of regional and statewide local government resources as related to energy efficiency, climate adaptation, and local planning

Lessons Learned
• Attendees provided positive feedback and thoroughly enjoyed the information that was provided.

Knowledge Transferred

- Information attained from these educational programs help participants learn more about current and upcoming energy standards.

- Information from these programs can be provided to other implementers through networking.

Next Steps

- Continue to provide education workshops to engage jurisdictions to be able to become more knowledgeable on energy efficiency measures.

Benefit to the State

- The State benefits from this task through the decisions made by elected officials and other key staff at the Participating Municipality. This training provided the attendees with information on the value of energy efficiency and action planning to the Participating Municipality and its constituents.

- Implemented measure will aid with the reduction of greenhouse gas emissions (GHG's) such as AB 32.

Benefit to Local Government

- One benefit to local government was the identification and discussion of financing opportunities for energy efficiency projects in municipal facilities.

- Staff of Participating Municipalities was informed and educated on the resources that will promote energy efficiency policies and combat high energy usage.

Successes

- Implementer hosted a centrally located 2013 Energy Summit at the City of Temecula. The 2013 Energy Summit consisted of multiple facets of energy efficiency including: regional best practices, energy efficiency financing opportunities, upcoming building code changes relevant to jurisdictional staff, and a wide range of regional and statewide local government resources as related to energy efficiency, climate adaptation, and local planning.

- Eight elected officials, six department heads, 26 city staff from nine partnership cities, and 67 staff from outside Implementer partnership attended the 2013 Energy Summit.

Challenges
• No significant challenges were encountered in this task.

2.7 Strategic Plan Task 1.2.1 – Implement Any of the Strategies in SP Strategy 1.1 Through a Process Involving Internal and External Stakeholders, Etc.

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

2.7.1 City of Brea – Phase 1

Local Government Partnership: Community Energy Partnership

Project Title: Develop implementation plans and materials for a program based on the online permitting system developed in a prior task

Project Purpose: Implement any of the strategies developed under SP Task 1.1.5. that promote energy efficiency permits, streamlines processing for customers and the Implementer, and provides the means to track energy efficiency projects

Project Scope and Components: Develop implementation plans and materials for a program based on the online permitting system developed under SP Task 1.1.5. This shall include developing program policies and procedures, identifying key roles and responsibilities, identifying key purchases or agreements to be entered, and performance goals, e.g., participation levels, increased activity, etc. Implementer may also include communication strategy, training and education, website/software development, and marketing strategy.

Through this task the Implementer was to develop implementation plans and materials for a program based on the online permitting system developed in a prior task, SP Task 1.1.5 ("Purchase and Implement and Energy Efficiency Online Permitting System in Conjunction with Santa Monica's CEEPMS System). This prior task was cancelled due to compatibility issues with the City's existing systems and the proposed online permitting system that was a component of the City's partner in the task, the City of Santa Monica. Thus, this task was dropped by the Implementer.

    Deliverables:

1. Draft Implementation Plan for Strategy Developed Under SP Task 1.1.5
2. Final Implementation Plan for Strategy
3. Implementation Report
4. Report on Best Practices and Lessons Learned
5. Monthly report of tracked Performance Indicators

Date Approved (Advice Letter (NTP)): March 2011 (April 2011)

Date Completed (est.): April 2012

Date Completed (actual):
Task Terminated.
This task was not undertaken since it was dependent on SP Task 1.1.5 that was terminated due to compatibility issues between Information systems.

Estimated Cost: $24,853

Final Program Cost: $241,581 ($241,153 Budget)

Local Match Contribution: $0

Project Reimbursed for LG Staff Time: Ⓨ / N

Program Budget Unspent: $0

Best Practices
• None. The task was terminated due to compatibility issues between information systems.

Lessons Learned
• Ensure information systems are compatible before engaging with an online permitting system.

Knowledge Transferred
• None. The task was terminated due to compatibility issues between information systems.

Next Steps
• None. The task was terminated due to compatibility issues between information systems.

Benefit to the State
• None. The task was terminated due to compatibility issues between information systems.

Benefit to Local Government
• None. The task was terminated due to compatibility issues between information systems.

Successes
• None. The task was terminated due to compatibility issues between information systems.

Challenges
• Information compatibility issues required this task to be terminated.

2.7.2 Coachella Valley Association of Governments – Phase 1

Local Government Partnership: Desert Cities Partnership

Participating Municipalities: Blythe, Cathedral City, Desert Hot Springs, Indian Wells, Palm Springs, Rancho Mirage, and the Agua Caliente Band of Cahuilla Indians

Project Title: Voluntary Green Building Program

Project Purpose: Develop the program components for the Voluntary Green Building Policy developed under SP Task 1.1.2 and implement the Voluntary Green Building Program for each Participating Municipality.

Project Scope and Components: Voluntary Green Building Program (VGBP): Implementer will design and implement the Coachella Valley Voluntary Green Building Program ("Voluntary

Green Building Program") based on what was developed under SP Task 1.1.2. The VGBP will focus on existing buildings, increasing the installation of energy efficiency equipment that exceeds Title 24, and will encourage adoption of processes to encourage energy efficiency such as online permitting. The VGBP will train Plan Checkers, planning staff, Building Inspectors, and code compliance staff on the merits of energy efficiency and specifically of energy efficiency equipment exceeding Title 24 standards.

Through this task the Implementer will develop the following:

- Green Building Guide

- Green Building Outreach Program

- Green for Life Website

- Green Building Application with a cost saving calculator to help consumers make decisions on energy retrofits and green building measures

- Educational Kiosk to provide information on energy efficiency and green building as well as to provide links to SCE's energy efficiency and rebate information

Deliverables:

1. Draft Manual

2. Final Manual

3. Draft Voluntary Green Building Program Website content

4. Live and fully functional Voluntary Green Building Program Website

5. Voluntary Green Building Program launch and continuing implementation, to include implementation of Voluntary Green Building Program Communications Plan, and education and outreach campaign as per the approved Manual

6. Voluntary Green Building Program Website content updates

7. Voluntary Green Building Program Implementation Report

8. Monthly reports of tracked Performance Indicators

Date Approved (Advice Letter (NTP)): March 2011

Date Completed (est.): Sept 2012 **Date Completed (actual):** Dec 2014

Estimated Cost: $759,614   **Final Program Cost:** $3,924,823 ($4,915,380 Budget)

Local Match Contribution: $0

Project Reimbursed for LG Staff Time: Y / N

Program Budget Unspent: $990,557

Best Practices
• The Green for Life program provided an umbrella for our region of energy efficiency and sustainability actions that were adopted by all our participating jurisdictions.
• A Green Building app was developed for use by homeowners and others to help them decide on the most cost and energy efficient upgrades for their home.
• The Green for Life website showcases the energy efficiency and green building actions in the Coachella Valley and demonstrates the leadership by example of our local governments.

Lessons Learned
• Seven Participating Municipalities of widely varying size, socio-economic level and geography made the creation and implementation of a consistent message more complex.
• The unified efforts among Participating Municipalities to promote energy efficiency and green building through the Green for Life program provided a strong regional message and thus, had a greater impact.
• Economic conditions were at their worst for most of the program life. As a result,
o Participating jurisdictions had limited staff or staff time to devote to the effort.
o Property owners had limited funds to consider using on home improvements and remodels.
• For the foreseeable future, jurisdiction staff will continue to have limited time and resources.
• Jurisdictions will therefore continue to rely on the Implementer if the program is to be implemented.
• In order to maintain promotion of the Green Building Program, Implementer staff will need to continue to promote program and assist the jurisdictions. Assistance will need to take the form of ongoing training and outreach events.
• Community events were most successful when Green for Life was promoted in existing, established events throughout the area. A "built in audience" was of great benefit to the program.
• Continued funding of advertising and public relations efforts would improve the implementation of the program.
• Outreach limited to jurisdictions' public officials in insufficient to maintain and implement the program. Community support is needed to keep the momentum of

Green Building activity in the Coachella and Palo Verde Valley.

- The simpler, "low hanging fruit" solutions contained in the Green Building Program can be more easily promoted, and are more likely to be implemented than the larger, whole house/building remodels for energy efficiency.

- The number of community events and media outlets in the Coachella and Palo Verde Valleys result in a dissipation of the message, and a high cost associated with media saturation.

- Because the Green Building Program was updated to address 2013 Title 24 updates, Implementer has the opportunity to support the program and encourage the Participating Municipalities to promote its implementation for at least three years. The additional time could be valuable in expanding the program.

- Implementer's CV Upgrade and HERO Property Assessed Clean Energy (PACE) programs should integrate the Green Building Program in their promotional efforts to expand the audience for all these activities.

- Implementer should continue to look for cross-promotion partners to maximize the outreach potential for the Green Building Program. Enlisting continued support from the US Green Building Council, College of the Desert, University of California and California State University campus programs could provide strong continuing educational opportunities.

Knowledge Transferred

- Through the Energy Leader Partnership, the Implementer has disseminated Green for Life program information to partners including the Coachella Valley Economic Partnership, Desert Valleys Builders Association, local water districts, and other local governments not served by SCE. We will continue to share information through our Green for Life website, articles in jurisdiction newsletters and websites, outreach events, presentations to community groups, and media/social media outreach.

Next Steps

- With the economic recovery and an uptick in building activity, we want to promote the Green Building App and the policy adopted by all our member cities. One city has recently made the Green Building Policy mandatory for a downtown revitalization project.

Benefit to the State

- This task helped promote the state goals in the California Long Term Energy Efficiency Strategic Plan (CLTEESP).

Benefit to Local Government
• The resources – a green building app, Green for Life website, and educational tools would not have been possible without the resources provided by this program.
• Staff and city officials are much more aware of green building benefits and opportunities.

Successes
• The program was designed to integrate long-term energy efficiency and climate action planning for our local governments with other elements of the Strategic Plan. A strategy was chosen to bring together municipal energy efficiency tasks including benchmarking, commissioning/retro-commissioning, a utility management system, and energy action planning with sustainability programs – green building and beyond Title 24 tasks as well as greenhouse gas inventories and climate action plans. These tasks were unified as a green government initiative with the Green for Life brand.

Challenges
• There was little internal support for a mandatory Reach Code.

2.7.3   City of El Segundo – Phase 1

Local Government Partnership: South Bay Partnership

Project Title: Marketing the On-Line Permitting Service

Project Purpose: The goal of this task is to increase code compliance and increase energy efficiency measure adoption by offering the on-line permitting service and providing the support necessary to gain broad adoption of the on-line permitting system.

Project Scope and Components: Implementer will market the on-line permitting services. Implementer will use Implementer's communications such as Implementer's web-site, brochures, fact sheets, and email to promote the existence of this online service. The Chamber of Commerce will also promote the on-line permitting service to business customers. The Implementer will also hold three workshops describing the availability of the on-line permitting service.

> **Deliverables:**

1. Implementation plan for the marketing strategy of the on-line permitting service
2. Report on implementation of the marketing strategy for the on-line permitting service
3. Report on lessons learned in the implementation of the on-line permitting service and the energy efficiency educational programs
4. Monthly status report

Date Approved (Advice Letter (NTP)): March 2011 (April 2011)

Date Completed (est.): September 2012   **Date Completed (actual):** May 2013

Estimated Cost: $40,500   **Final Program Cost:** $454,153 (486,500 Budget)

Local Match Contribution: $0

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

Program Budget Unspent: $32,347

Best Practices
• Through the implementation of this task (Marketing of the Online Permitting System) the following best practices were used as guiding principles:
○ During the conceptual design phase of the web service it was determined that the best approach for Implementer was to set up this service as an "Online Permit Center" ("OPC"). The OPC would be a singular location for permit applicants to apply for and purchase building permits, access utility incentive and energy efficiency resources relevant to their projects, and access information from the Building and Safety division.

Lessons Learned
• The following lessons learned were gathered during the implementation of this task:
○ **Including Building and Safety staff in the various stages of development of the online permit service has many benefits.** The Staff can provide critical input on how to optimize the functionality of the system. Staff are most familiar with the permit applicants, and therefore can best communicate their preferences, tendencies, and thereby speak to how to develop the online permit service to cater to these attributes. Customizing the system to fit user needs leads to higher usage rates. This knowledge of the user is also transferable to marketing of the service. Staff provided information that helped to craft messaging and communications to the target audiences.
○ **Getting early buy-in from department directors and council members**

results in increased engagement from staff and effective "word-of-mouth" marketing. The Director of Planning was a champion of the service since the beginning of the program. This was extremely helpful in moving the development through technical challenges and road bumps along the way. We also provided an early preview of the system to City Council which allowed them to be aware of the new service in development, stoking interest at the beginning. A follow up Special Agenda meeting once the service was near launch was held to remind them of the benefits and to demonstrate the functionality of the system. Keeping the City Council engaged led to high-level support for the service and armed council members with talking points to inform their constituents of the new service being provided by the Implementer. High-level support also had a trickle-down effect on staff, as they were more willing to show support and be engaged in promoting the new service.

o **Incorporating benefits on energy efficiency and links to rebate program adds value to the permit process for applicants.** The community is now able to more easily comply with permit requirements while at the same time gain useful information about efficiency benefits and incentive programs to help pay for projects.

Knowledge Transferred

- Implementer can share information with cities participating in Southern California Edison's (SCE) Energy Leader Partnership program through SCE's peer meetings and newsletter, participating in best practices interviews facilitated by SCE, and through other local government events. For example, Implementer's representatives presented their lessons learned on development of their Online Permitting Systems at the SCE Partnership Strategic Plan Conference.

Next Steps

- Implementer will continue to market the online permitting system through the city's website, and further embed into city operations.

Benefit to the State

- Local governments integrating energy efficiency in their municipal operations align with the state's "loading order" of first addressing energy efficiency as California's top priority resources.

Benefit to Local Government

- Online permitting website has been in use by residents and contractors for one (1)

> year
>
> - To facilitate code compliance: By streamlining and making more convenient the issuance of building permits for certain projects, we expect code compliance to increase.
>
> - To educate on energy efficiency: We see an opportunity to increase the installation of energy efficiency equipment and measures by residents and businesses by educating them about SCE's core rebate and incentive programs.
>
> - To integrate energy efficiency into our core municipal services: This online permitting service will also serve to educate our internal staff regarding the connection between code compliance, building permitting and energy efficiency.

Successes

- A customized marketing program was developed and implemented to staff and local contractors and residents.

- The Implementer developed and is implementing an online permitting service that promotes energy efficiency in the community. The Implementer anticipates that the online permitting system will fulfill the following goals and objectives:

- During the conceptual design phase of the web service it was determined that the best approach for Implementer was to set up this service as an "Online Permit Center" ("OPC"). The OPC would be a singular location for permit applicants to apply for and purchase building permits, access utility incentive and energy efficiency resources relevant to their projects, and access information from the Building and Safety division.

Challenges

- In the implementation of this task no challenges were encountered.

2.7.4   City of Simi Valley – Phase 2

Local Government Partnership: Simi Valley Partnership

Project Title: Implement Voluntary Green Building Program

Project Purpose: Through this task the Partner will implement the voluntary green building program developed in SP Task 1.1.2 to increase energy efficiency in buildings in its jurisdiction, and promote increasingly stringent EE on a voluntary basis.

Project Scope and Components: Implementer will implement all of the activities and recommendations adopted by the city council for the Voluntary Green Building Program. Implementation activities include changes in permitting, plan checking and inspection procedures. Implementation activities also include revising forms, training staff on the new procedures and conducting outreach to the community.

Deliverables:

1. Planning report for the implementation of the Voluntary Green Building Program

2. Implementation report for Voluntary Green Building Program forms and procedures

3. Implementation report for training Implementer's staff on Voluntary Green Building Program forms and procedures

4. Implementation report for promoting the Voluntary Green Building Program to property owners and building professionals

5. Report on performance indicators

6. Monthly Status Report

Date Approved (Advice Letter/NTP): December 2011 (December 2011)

Date Completed (est.): September 2012   **Date Completed (actual):** December 2013

Estimated Cost: $76,500   **Final Program Cost:** $611,356 ($389,500 Budget)

Local Match Contribution: $0

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

Program Budget Unspent: $0

Best Practices
• A marketing plan was developed including the establishment of a voluntary green building web site. www.simivalley.org/savegreen.
• At initial program launch, the City promoted taking advantage of incentive and rebate programs to increase energy efficiency at public events and at the permit counters, and engaged local contractors to offer free energy audits as prizes. Permit staff was informed of the effort and took time to encourage builders to adopt additional energy measures.

Lessons Learned
• Less political support for the program with the roll out of the 2013 Title 24 and CALGreen standards for energy efficiency. Be mindful of this while developing policies.

Knowledge Transferred
• This document serves as the primary mechanism of conveying best practices and lessons learned from this task. However, the implementer is available to discuss this further with any interested parties.

Next Steps
• Web site administration is managed by staff with intentions of refreshing and maintaining site. • Staff will continue to promote energy efficiency for the foreseeable future at public events

Benefit to the State
• By implementing this program energy will be used more efficiently, thereby reducing energy use and GHG emissions. Increasing energy efficiency aligns with the Energy Efficiency Strategic Plan and the State's "loading order".

Benefit to Local Government
• The voluntary green building web site is accessible to the community which serves as a centralized tool for learning about new services and utility incentives. The site is promoted during community events and at public counters.

Successes
• A marketing plan was developed including the establishment of a voluntary green building web site. www.simivalley.org/savegreen. • At initial program launch, the City promoted taking advantage of incentive and rebate programs to increase energy efficiency at public events and at the permit counters, and engaged local contractors to offer free energy audits as prizes. Permit staff was informed of the effort and took time to encourage builders to adopt additional energy measures.

Challenges
• Significant staffing cuts and changes in procedures have negatively impacted implementation of the program. • Less political support for the program with the roll out of the 2013 Title 24 and CALGreen standards for energy efficiency. • Engaging contractors in participation and promotion of program was a challenge. Part of the reason for this was the phenomena of "permit avoidance" by contractors.

2.7.5   City of South Gate – Phase 1

Local Government Partnership: South Gate Partnership

Project Title: Implement Voluntary Green Building Program

Project Purpose: Implement the Voluntary Green Building Program developed under SP Task 1.1.2. Implementer will take the policy and program designed previously, prepare appropriate program materials and infrastructure, and launch the program.

Project Scope and Components: The Implementer will implement the Voluntary Green Building Program developed in SP Task 1.1.2. Using the Voluntary Green Building Program Manual, Voluntary Green Building Training Materials and the Voluntary Green Building Program Marketing Plan as the starting point the Implementer will develop marketing materials, program website and launch the program.

Deliverables:

1. Draft Voluntary Green Building Program marketing materials
2. Final Voluntary Green Building Program marketing materials
3. Live and fully functional Voluntary Green Building Program online resource Web pages
4. Voluntary Green Building Program launch announcement to public
5. Monthly report of tracked Performance Indicators

Date Approved (Advice Letter (NTP)): March 2011 (May 2011)

Date Completed (est.): November 2011   **Date Completed (actual):** June 2013

Estimated Cost: $205,925   **Final Program Cost:** $887,332 ($886,000 Budget)

Local Match Contribution: $0

Project Reimbursed for LG Staff Time: Ⓨ/ N

Program Budget Unspent: $0

Best Practices
• Please see task 1.1.2 for all details of the Voluntary Green Building Program.

Lessons Learned
• Please see task 1.1.2 for all details of the Voluntary Green Building Program.

Knowledge Transferred
• Please see task 1.1.2 for all details of the Voluntary Green Building Program.

Next Steps
• Please see task 1.1.2 for all details of the Voluntary Green Building Program.

Benefit to the State
• Please see task 1.1.2 for all details of the Voluntary Green Building Program.

Benefit to Local Government
• Please see task 1.1.2 for all details of the Voluntary Green Building Program.

Successes
• Please see task 1.1.2 for all details of the Voluntary Green Building Program.
• A marketing plan was developed including the establishment of a voluntary green building web site.
• At program launch, the City promoted:

- o   A new fast tracking service,

- o   An online permitting web site, and

- o   The expanded presale housing program.

- The green building web site is http://www.energysmartsouthgate.com.

Challenges

- The Implementer has a significant Spanish speaking community.

  - o   The web site would need to include a translation function to reach entire community.

3. Strategic Plan Goal 2 – Code Compliance

"Strong support from local governments for energy code compliance enforcement."

3.1 Strategic Plan Task 2.1.1 – Code Compliance Workshops

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.

3.1.1 City of Beaumont – Phase 1

Local Government Partnership: Beaumont Partnership

Project Title: Code Compliance Workshops

Project Purpose: Improve code compliance by implementing a training program to improve Title 24 and CALGreen Code compliance through improved permit processing and inspections.

Project Scope and Components: This training for the city code enforcement officials ("Code Enforcement Training") will specify the targeted audience, number, type and frequency of training events, and a description of the training curriculum and instructor criteria. Implementer will review and assess specifications of the statewide Title 24 code enforcement training program offered by the IOUs and other related educational resources, and include in the report a summary of the findings of the assessment and justification for the training resources.

> **Deliverables:**

1. Report on Status of Consultant or Subcontractor to Support the Task
2. Code Compliance Training Program Assessment Report and Training Plan
3. Implementation Report
4. Report on Best Practices and Lessons Learned
5. Monthly report of tracked Performance Indicators

Date Approved (Advice Letter (NTP)): March 2011 (September 2011)

Date Completed (est.): April 2012   **Date Completed (actual):** November 2012

Estimated Cost: $10,000   **Final Program Cost:** $81,452 ($110,000 Budget)

Local Match Contribution: $0

Project Reimbursed for LG Staff Time: Ⓨ / N

Program Budget Unspent: $28,548

Best Practices
• Provide directed training that has a hands-on approach for code compliance professionals.
• Find out what local commercial and residential developers are already doing to address energy efficiency requirements in their buildings.
• Communicate the successes of trainings to elected officials and staff; this encourages support for future trainings, both through funding and in providing in-kind support.

Lessons Learned
• Tailor groups based on knowledge to manage student feelings of being overwhelmed
• Reach out to other LGs for cooperative training opportunities to leverage the training resources.

Knowledge Transferred
• Implementer is committed to sharing training information and opportunities with the cities in the surrounding area including Banning and Calimesa. The Implementer worked with the Coachella Valley Association of Governments (CVAG) and the Western Riverside Council of Governments (WRCOG) to disseminate relevant code compliance information and training opportunities for other cities to leverage.
• Attendees included members of the Citrus Belt and Coachella Valley Chapter of the California Building Officials' cities and COGs.

Next Steps
• Implementer will encourage continuous staff training on code compliance. In particular, the Implementer will leverage cost-effective and free training made available through various organizations including CALBO, CABEC and SCE.

Benefit to the State
• The State will benefit from this task through improved code compliance resulting from better trained code enforcement professionals at the Participating Municipality.

Increased code compliance can result in reduced energy use and GHG emissions.

- This task helps the State to meet AB 32 goal.

Benefit to Local Government

- The Implementer will realize benefits from the effort to educate staff on statewide codes and standards and how to more accurately assure compliance and to address non-compliance through increase code compliance and reduced energy use in the City.

- Staff is better positioned to influence the energy usage of the greater community. In effect, we are able to help our community adopt effective energy efficient solutions that will reduce the Implementer's overall energy consumption.

Successes

- The Code Compliance Education Program provided building inspectors and code compliance staff from the Implementer's Staff and neighboring cities with guidance in successfully meeting statewide sustainability targets while increasing energy efficiency expertise, encouraging increased code compliance, and ensuring more effective enforcement practices. The Implementer hosted the following workshops:

  o October 17-2013, CALBO Education Week: educational and training courses for local government building officials. Courses are specifically developed to allow optimum educational opportunities on topics such as California Building Code, California Residential Building Code, Green Building Code, Solar Photovoltaic Systems, State Laws Enforced by Building Departments, and Practical Code Enforcement for Building Officials.

  o March 13, 2012, California Electric Code: an interactive course that illustrated the changes to the 2010 California Electrical Code. The provided material will help participants understand provisions and provide background and intent of the significant changes in order to make subjective decisions on a case-by-case basis. Changes to the Electrical Code include four new articles, major changes to arc-fault and ground-fault compliance, new solar photovoltaic requirements, and compliance requirements for tamper-resistant receptacles. The course detailed the changes to equipotential bonding grid for swimming pools and new requirements for bonding communication circuits.

  o March 29, 2012, Statewide Codes and Standards Training (Residential): this training provided through Southern California Edison focused on residential building energy standards for plan examiners and building inspectors. The course was aimed at providing plan examiners and building inspectors with the knowledge and skills needed to quickly and effectively enforce the energy code for nonresidential projects to builders and clients. The course also allowed participants to apply their knowledge of the 2008 building energy efficiency standards for nonresidential new construction, additions, and alterations to

> typical job tasks.
>
> o May 3, 2012, Statewide Codes and Standards Training (Non-Residential): This training was the nonresidential counterpart to the training attended by City staff on March 29, providing the nonresidential point of view for building energy standards for plans examiners and building inspectors. The course similarly allowed participants to apply their knowledge of the 2008 building energy efficiency standards for nonresidential new construction, additions, and alterations to typical job tasks.

Challenges
- There was little internal support for a mandatory Reach Code.

3.1.2   City of El Segundo – Phase 1

Local Government Partnership: South Bay Partnership

Project Title: Code Compliance Workshops

Project Purpose: This task will result in increased code compliance through improved plan checking and inspection processes, as well as better awareness of the importance of code compliance by Implementer's staff.

Project Scope and Components: The Implementer will identify approximately five (5) workshops and send up to 12 staff to two workshops each to increase city expertise in energy efficiency, codes and standards. The primary focus is the existing Statewide Codes and Standards Program workshops offered by the investor owned utilities.

> **Deliverables:**
>
> 1. Code compliance training plan
> 2. Report on implementation of code compliance training
> 3. Report on lessons learned from the code compliance training
> 4. Monthly status report

Date Approved (Advice Letter (NTP)): March 2011 (April 2011)

Date Completed (est.): September 2012   **Date Completed (actual):** May 2013

Best Practices/Lessons Learned from Strategic Plan (Draft)

Estimated Cost: $18,000   **Final Program Cost:** $454,153 (486,500 Budget)

Local Match Contribution: $0

Project Reimbursed for LG Staff Time: Ⓨ / N

Program Budget Unspent: $32,347

Best Practices
Utilize classes offered by industry recognized organizations (e.g., Southern California Edison, California Building Officials). It was important to take advantage of courses offered by utility companies and organizations to leverage previously vetted workshops led by expert instructors in the subject. Moreover, the approach was cost effective versus developing a tailored training specifically for the Implementer.   **Review and assess potential workshops to ensure that they address issues related to local governments.** While many seminars and workshops are offered through a multitude of organizations and programs, an assessment of the courses was necessary to ensure that the topics would add value to the specific needs of the Building & Safety and Planning Departments.   **Staff should take an active role in the design and execution of the training program**. Staff was proactive in planning the Code Compliance Education Program, selecting courses and specific Staff members that would highly benefit from the workshops. This resulted in a maximum attendance by personnel as they registered to courses that they felt were necessary to enhance their knowledge and skills as it related to their responsibilities.

Lessons Learned
Lack of availability of existing workshops due to limited class offerings. Limited class offerings posed an obstacle to Staff that is already constrained on time. This compelled workshop participants to extensively rearrange their schedules and find other staff to cover for them as they attended the courses. Making the proper arrangements is challenging for most cities as many have limited human resource capital due to budget cuts.   **Secure funds to pay for course fees and associated costs.** A city must ensure that funds are accessible to cover the expenses (e.g., registration costs, mileage, meals, etc.) associated with attending a workshop. While there are free courses offered through many utility companies, having additional course options (even though many charge a fee) provides flexibility in scheduling classes and offer participants a greater scope of subjects from which to choose.

Knowledge Transferred

- Implementer staff have gained necessary education and training to comply with the current Building Energy Efficiency Standards, and the use compliance software.

Next Steps

- Staff will continue to seek additional training opportunities to keep Staff current in changes to energy codes

Benefit to the State

- Local governments integrating energy efficiency in their municipal operations align with the state's "loading order" of first addressing energy efficiency as California's top priority resources.

Benefit to Local Government

- Implementer developed a much needed educational program that increased city staff knowledge to ensure compliance with Title 24 and CALGreen standards.

Successes

- Staff attended training programs offered by the Statewide Codes & Standards team for non-residential.

- Staff members attended training sessions provided by California Building Officials (CALBO) in Ontario, CA from October 17 to October 20, 2011. During these training sessions, Staff members attended training on plumbing codes, electric codes, fire sprinkler systems, housing accessibility, green building codes, and others. A total of nine (9) courses were attended by Staff.

Challenges

- No significant challenges were encountered in this task.

3.1.3   City of Moreno Valley – Phase 1

Local Government Partnership: Community Energy Partnership

Project Title: Staff Code Compliance Training

Project Purpose: Increase code compliance by improving code enforcement by providing building officials and building inspectors with the skills, knowledge and processes that enhance Implementer's code compliance enforcement.

Project Scope and Components: The Implementer will develop and manage training for Staff consisting of both "in-house" training using local resources, as well as, specialized "outside" training for select individuals using other external resources.

Staff collaborated to plan the trainings. The Building Department and Planning Department developed the overall training plan, including what staff should attend specific trainings. Trainings were presented by a variety of subject matter experts include:

- CALGreen
- Energy Upgrade California
- SCE C&S events
- SEEC

Deliverables:

1. Report on Status of Implementer or Subcontractor to Support the Task
2. Code Compliance Training Program Assessment Report and Training Plan
3. Implementation Report of "in-house" training
4. Implementation Report of "outside" training
5. Monthly report of tracked Performance Indicators

Date Approved (Advice Letter (NTP)): March 2011 (April 2011)

Date Completed (est.): April 2012   **Date Completed (actual):** March 2014

Estimated Cost: $89,591   **Final Program Cost:** $365,379 ($375,513 Budget)

Local Match Contribution: $0

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

Program Budget Unspent: $10,134

Best Practices

- Webinars and in-person trainings help to increase the amount of people that are able to attend trainings.

- Leverage trainings that are currently offered.

Lessons Learned

- The training has helped to provide detailed information on energy subjects, and circumstances relevant to their job description and their on the field inspections.

Knowledge Transferred

- This document serves as the primary mechanism of conveying best practices and lessons learned from this task. However, the implementer is available to discuss this further with any interested parties.

Next Steps

- The Implementer will improve the code enforcement process by redesigning forms, improving code communication with contractors and applicants via enhanced handouts, and improving the process flow for permit and plan processing.

Benefit to the State

- The State will benefit from this task through improved code compliance resulting from better trained code enforcement professionals at the Participating Municipality. Increased code compliance can result in reduced energy use and GHG emissions.

Benefit to Local Government

- Implementer's Inspectors that participated in the trainings have used these trainings as a great tool for their ongoing education of new, current, and all code changes.

- The training has helped to provide detailed information on energy subjects, and circumstances relevant to their job description and their on the field inspections

- The training provided by this task will indirectly have a beneficial impact on energy efficiency by ensuring that plan check reviews and building inspections are completed according to current code requirements.

Successes

- Staff hosted an SCE-sponsored training on CALGreen at the City Hall facilities in May 2012. There were nearly 30 attendees from several cities within the Inland Empire.

- Staff attended additional workshops via webinar or in person:

    o April 2011: webinar: CALGreen for Residential

    o June 2011: Energy Upgrade California, Inland Empire

    o December 2012: CALGreen in Commerce

    o October 2013: webinar on Residential HVAC. "Decoding HVAC: Let's Talk Residential HVAC Change outs for Field Inspectors" Information was given on how to determine SEER rating and tonnage of AC equipment in the field. Proper verification and review of Energy compliance forms while conducting HVAC inspections. Test measures and methods of verifying/inspecting the information noted in the Energy Compliance forms for the HVAC equipment. Proper installation of line set foam wrap and AC tamper resistant caps on AC units.

Challenges
- No significant challenges were encountered in this task.

3.1.4   City of Santa Monica – Phase 1

Local Government Partnership: Community Energy Partnership

Project Title: Energy Code Enforcement Training

Project Purpose: Improve compliance with State and Local building codes to improve the energy efficiency in the community.

Project Scope and Components: Implementer will develop and implement a training program on Title 24 code enforcement for city code enforcement officials specifying the targeted audience, number, type and frequency of training events. A minimum total of six (6) Code Enforcement Training sessions will be conducted and will act to enhance attendees' ability to enforce Title 24 code and "reach" code requirements, and will focus specifically on the role and responsibilities of code enforcement staff including building officials, and plan check and inspection staff.

Deliverables:

Best Practices/Lessons Learned from Strategic Plan (Draft)

1. Assessment and Planning Report for Code Enforcement Training
2. Draft Code Enforcement Training curriculum, materials (including participant survey) and schedule
3. Final Code Enforcement Training curriculum, materials (including participant survey) and schedule
4. Draft Code Enforcement Training promotion plan and materials
5. Final Code Enforcement Training promotion plan and materials
6. Draft plan to share best practices and lessons learned with peer cities
7. Final plan to share best practices and lessons learned with peer cities
8. Six (6) Code Enforcement Training sessions
9. Code Enforcement Training Implementation Report
10. Monthly report of tracked Performance Indicators

Date Approved (Advice Letter (NTP)): March 2011 (June 2011)

Date Completed (est.): October 2012 **Date Completed (actual):** July 2013

Estimated Cost: $44,000 **Final Program Cost:** $317,974 ($374,000 Budget)

Local Match Contribution: $0

Project Reimbursed for LG Staff Time: Y / N

Program Budget Unspent: $56,026

Best Practices
• Invite as many code officials from other local governments as possible.
• Provide separate training sessions for residential and commercial and multi-family construction.
• Attempt to make attendance as easy as possible for code

Lessons Learned
• Four hours is the maximum length of time that was really effective for attendees to be able to learn the information. In practice it would be more effective to host several two hour sessions, covering different topics. In this way, no one training session is too long and multiple trainings have a reinforcing effect on material that was learned in a previous session.

- Longer sessions also pose logistical problems for managers who still have to ensure that plans are reviewed and buildings are inspected on time.

- The trainings were divided between Residential and Non-Residential trainings. This seemed to make sense because the Energy Code treats those occupancies differently as well. In the future it may be useful to consider a Multi-family occupancy track, as multifamily buildings can contain overlapping elements depending on how many stories they contain.

- Some of the more valuable learning took place around situational activities. Attendees reviewed a mock set of plans, or answered questions about a mock Title 24 report. These sorts of situational activities and exercises proved to be effective in allowing attendees to make connections between the language of the Energy Code and the daily functions of their job.

- It was difficult to achieve increased attendance at the trainings. Despite several marketing efforts through distribution of flyers, personal emails to building department contacts, and dissemination through industry trade groups and associations, attendance dropped for each subsequent training session. Through anecdotal conversations with attendees, we learned that building departments have been challenged in these economic times, and it is difficult to spare department staff for a training session, especially a longer training session.

- It is also worth noting that plan check and building inspection staff do not typically attend many trainings on any topic in a given year. To host numerous trainings on a narrow topic (compared to the entirety of the building code) such as energy, seemed excessive and hampered attendance at subsequent training sessions.

Knowledge Transferred

- Code officials learned which common violations of the building code to look for.

- Code officials were educated regarding the importance of proper enforcement of Title 24 to the state's ability to meet its climate change and energy goals.

- Code officials learned how and when during a building project to inspect for violations of the energy code.

Next Steps

- Continued engagement with building inspectors to prioritize enforcement of Title 24.

- Work with plan checkers to enhance review of Title 24 documents.

- Additional training may be needed as building codes change and become more stringent.

Benefit to the State
• Real energy savings through enhanced enforcement of the title 24 building code.
• Energy cost savings for residents and tenants due to adherence with building code.

Benefit to Local Government
• Provided free training that otherwise would have had been a burden on local government budgets.
• Progress toward sustainability goals with better quality more energy efficient new buildings.

Successes

• The Implementer conducted three (3) trainings on energy code enforcement. These trainings were:
 	
   o PEBI Non-Residential Code Enforcement (8 hours), Santa Monica Main Library, September 14, 2011 (SCE Statewide C&S)
 	
   o Residential Energy Code Enforcement (4 hours), Santa Monica Main Library, January 30, 2012
 	
   o Non-Residential Energy Code Enforcement (4 hours), South Bay Environmental Services Center, July 11, 2012
 	
This fell short of the original goal of six (6) trainings, but it yielded good training opportunities.

Challenges
• Attendance at the trainings was a challenge. With diminished staffing levels and tight budgets it was difficult for staff to have adequate coverage.
• The length of the training sessions was problematic, as it was found that four hour sessions, while ideal from a training perspective, were a bit long and made attendance a challenge. Two hour training sessions were found to be more effective.

3.1.5   City of Simi Valley – Phase 2

Local Government Partnership: Simi Valley Partnership

Project Title: Title 24 Code Compliance and Green Building Code Workshops

Project Purpose: Implementer will develop and implement a training program for building department staff that will impart the knowledge and provide the tools for properly enforcing new building codes and standards.

Project Scope and Components: Implementer will enable Implementer's staff to attend Title 24 Code Compliance and Green Building Workshops. Implementer will provide a minimum of three (3) training sessions for code compliance training and a minimum of three (3) training sessions for green building code training.

> **Deliverables:**

1. Assessment and Planning Report for Code compliance and green building code training
2. Report on implementation of code compliance and green building code workshops
3. Report on best practices and lessons learned from the training
4. Monthly status report

Date Approved (Advice Letter (NTP)): December 2011

Date Completed (est.): December 2012   **Date Completed (actual):** October 2012

Estimated Cost: $18,000   **Final Program Cost:** $611,356 ($389,500 Budget)

Local Match Contribution: $0

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

Program Budget Unspent: $0

Best Practices
• Leverage training programs offered by the Statewide Codes & Standards team for residential and non-residential, CALBO, and training offered at the Energy Resource Center and Energy Education Center. The workshops improved staff knowledge of Energy Codes and the ability of staff to communicate codes to the public.

Lessons Learned
• Workshops were not easy to attend due to logistics. Webinars or on-site trainings may provide a useful alternative.

Knowledge Transferred

- This document serves as the primary mechanism of conveying best practices and lessons learned from this task. However, the implementer is available to discuss this further with any interested parties.

Next Steps

- Building Official continues to identify workshops for Building Safety staff to effectively enforce 2013 Codes & Standards.

Benefit to the State

- The State will benefit from this task through improved code compliance resulting from better trained code enforcement professionals at the Participating Municipality. Increased code compliance can result in reduced energy use and GHG emissions.

Benefit to Local Government

- Eighteen (18) Building and Safety staff including inspectors, plan check engineers and permit technicians attended current codes and standards training and are now better equipped to understand and communicate T24 and CALGreen compliance to developers and applicants

Successes

- All Building and Safety staff, including inspectors, plan check engineers and permit technicians attended training programs offered by the Statewide Codes & Standards team for residential and non-residential, CALBO, and training offered at the Energy Resource Center and Energy Education Center. The workshops improved staff knowledge of Energy Codes and the ability of staff to communicate codes to the public.

- The Statewide Codes and Standards "T24 PEBI Code Compliance Training (SCE Statewide C&S)" held on September 21, 2011 was particularly effective in raising staff abilities.

- Eighteen staff members benefited from the training program.

Challenges

- Limited staff availability due to significant staff cuts.

- Workshops were not easy to attend due to logistics.

3.1.6   South Bay Cities Council of Governments – Phase 1

Local Government Partnership: South Bay Partnership

Participating Municipalities: Carson, El Segundo, Gardena, Hawthorne, Hermosa Beach, Inglewood, Lawndale, Lomita, Manhattan Beach, Palos Verdes Estates, Rancho Palos Verdes, Redondo Beach, Rolling Hills, Rolling Hills Estates, and Torrance

Project Title: Training for City Officials: Course Delivery

Project Purpose: This training module is targeted at elected officials, building officials, planning commissioners, and city staff members who deal with the public and planning and code compliance issues, and will educate them so they will be more effective in promoting energy efficiency, green building, demand response, on-site generation policies, ordinances and projects. The curriculum was developed by the Implementer under SP Task 1.1.6.

Project Scope and Components: The Implementer will provide, with the assistance of its Subcontractor, training to Participating Municipalities' elected officials, building officials, planning commissioners, and other city employees who deal with the public regarding building, planning and code compliance issues and who have demonstrated their interest and are looking for additional tools and information to support Program development to increase city approval of programs and ordinances that result in improved energy efficiency, demand response, and on-site generation programs.

> **Deliverables:**

1. Report on status of Subcontractor to support the task.
2. Deliver schedule of training workshops for SCE Review and approval.
3. Deliver first training workshops.
4. Deliver remainder of training workshops per schedule.
5. Maintain attendance roster of attendees and sample materials used for each session/workshop.
6. Implementation Report: Deliver Monthly reports from tracking system of key performance indicators.
7. Provide report of best practices and lesson learned in delivery of training workshops.

Date Approved (Advice Letter (NTP)): March 2011

Date Completed (est.): Sep 2012   **Date Completed (actual):** Oct 2014

Estimated Cost: $168,350   **Final Program Cost:** $1,003,190 ($900,480 Budget)

Local Match Contribution: $0

Project Reimbursed for LG Staff Time: Ⓨ / N

Program Budget Unspent: $0

Best Practices
• Strategic Plan Task 2.1.1 provides local government staff and contract staff with code compliance workshops offered by the California Energy Commission, utility codes & standards staff, or other local governments with strong compliance records. The Implementer was able to conduct 33 workshops that promoted increased city buy-in, support, and creation of energy efficiency programs. The attendees of the workshop were able to take the information they have learned and bring it back to their city. This allowed staff to become more aware and possibly improve energy efficiency, demand response, and on-site generation within the city.

Lessons Learned
• Determine delivery of training most beneficial and convenient for city staff, whether it be in person workshops, online webinars, training the trainers, or taking trainings directly to the city
• Work with cities and training organizations to create strategies to attract more city staff to attend and minimize detrimental impact on city work, such as stretching a two (2) full day training over four (4) half days
• Identify existing trainings related to specific needs of city staff

Knowledge Transferred
• All of the Participating Municipality staff that attended the training under a prior task will be able to bring the information they have learned back to their respective cities. They will spread their knowledge of the importance of energy efficiency, demand response, and on-site generation. This will cause greater awareness and may lead to implementation of energy programs within their cities.
• The Participating Municipalities can lead by example so that other local governments

> can learn from these efforts and may follow with similar programs.

Next Steps

- Leverage Energy Code Ace Training and bring training onsite to South Bay Local Government Partnership

Benefit to the State

- A trained workforce to ensure enforcement of California Building and Energy Codes using existing Energy Code Ace Training.

Benefit to Local Government

- Workshop evaluations demonstrated trainings have expanded the participants' knowledge of energy efficiency, current building and code enforcement standards, and permitting and code enforcement best practices to improve adoption of energy efficiency ordinances, standards, guidelines and programs.

Successes

- Hosted 33 workshops to approximately 10 elected officials, 3 planning commissioners, four (4) building officials, and 220 city staff from 2011 to 2014
    - Hosted 20 workshops by December 31, 2012
    - Hosted 11 workshops between August 1, 2013 and October 15, 2014
- 100% of workshop participants passed Build It Green Certified Green Building Professional exam (CGBP) during August 2014

Challenges

- Getting staff to attend was a challenge.

3.1.7   City of South Gate – Phase 1

Local Government Partnership: South Gate Partnership

Project Title: Code Compliance Workshops for City Staff

Project Purpose: In the past, code compliance has focused almost entirely on assuring that designs comply with structural and health and safety requirements, with almost no attention paid to the importance of energy efficiency. With this training staff will more effectively do plan checks with a focus on code compliance to ensure energy code compliance as well as health and safety.

Project Scope and Components: The Implementer will identify code compliance workshops appropriate for Implementer staff to attend in order to increase Implementer expertise in energy efficiency, codes and standards, and enable Implementer's staff participation as appropriate and applicable. Primary workshop selection criteria will include topics and curricula focusing on 2008 Title 24 Standards and CALGreen, the first mandatory statewide Green Building code in the nation, scheduled to take effect January 2011.

>   **Deliverables:**

1. Draft Code Compliance Workshop Assessment Report and Plan
2. Final Code Compliance Workshop Assessment Report and Plan
3. Code Compliance Training Program Implementation Report
4. Draft plan to share best practices and lessons learned with other local governments
5. Final plan to share best practices and lessons learned with other local governments
6. Monthly report of tracked Performance Indicators

Date Approved (Advice Letter (NTP)): March 2011 (May 2011)

Date Completed (est.): October 2012   **Date Completed (actual):** May 2013

Estimated Cost: 33,000   **Final Program Cost:** $887,332 ($886,000 Budget)

Local Match Contribution: $0

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

Program Budget Unspent: $0

Best Practices
• Utilized classes offered by industry recognized organizations (e.g., Southern California Edison, California Building Officials). It was important to take advantage of courses offered by utility companies and organizations to leverage previously vetted workshops led by expert instructors in the subject. Moreover, the approach was cost

effective versus developing a tailored training specifically developed for the Implementer.

- Reviewed and assessed potential workshops to ensure that they address issues related to local governments. While many seminars and workshops are offered through a multitude of organizations and programs, an assessment of the courses was necessary to ensure that the topics would add value to the specific needs of Implementer's Community Development and Public Works Departments.

- Staff took an active role in the design and execution of the educational program staff was proactive in planning the Code Compliance Education Program, selecting courses and specific staff members that would highly benefit from the workshops. This resulted in a maximum attendance by personnel as they registered to courses that they felt were necessary to enhance their knowledge and skills as it related to their responsibilities for the Implementer.

Lessons Learned

- Limited class offerings posed an obstacle to Implementer staff that is already constrained on time. This compelled workshop participants to extensively rearrange their schedules and find other staff to cover for them as they attended the courses. Making the proper arrangements is challenging for most cities as many have limited human resource capital due to budget cuts.

- Securing funds to pay for course fees and associated costs. A city must ensure that funds are accessible to cover the expenses (e.g., registration costs, mileage, meals, etc.) associated with attending a workshop. While there are free courses offered through many utility companies, having additional course options (although many charge a fee) provide flexibility in scheduling classes and offer participants a greater scope of subjects from which to choose.

Knowledge Transferred

- This document serves as the primary mechanism of conveying best practices and lessons learned from this task. However, the implementer is available to discuss this further with any interested parties.

Next Steps

- The Building Official continues to identify workshops that Building Safety and Code Compliance staff can take to improve code compliance.

Benefit to the State

- The State will benefit from this task through improved code compliance resulting from better trained code enforcement professionals at the Participating Municipality. Increased code compliance can result in reduced energy use and GHG emissions.

Benefit to Local Government

- The local government will benefit from this task through improved code compliance resulting from better trained code enforcement professionals at the Participating Municipality. Increased code compliance can result in reduced energy use and GHG emissions for residents of the local government.

Successes

- Staff attended variety of training programs offered by:
  - The Statewide Codes & Standards team for residential and non-residential,
  - CALBO, and
  - ICC.
  - Staff also attended training offered at the Energy Resource Center and Energy Education Center.
- Approximately 13 staff benefited from the training program.
- The Code Compliance Educational Program primarily focused on providing workshops for staff members who have frequent construction-related interaction with the local constituency. The Program utilized training options and courses offered by local agencies, utility companies, and other industry-recognized organizations. The following trainings were conducted:
  - Workshop 1: 2010 California Electrical Code (CALBO)
  - Workshop 2: 2010 California Plumbing Code (CALBO)
  - Workshop 3: California Green Building Code (CALBO)
  - Workshop 4: 2010 California Residential Code (CALBO)
  - Workshop 5: Practical Code Enforcement for Building Officials (CALBO)
  - Workshop 6: Solar Photovoltaic Systems (CALBO)
  - Workshop 7: Permit Technician I: Practical Application (CALBO)
  - Workshop 8: Permit Technician II: Practical Application (CALBO)
  - Workshop 9: Residential Building Codes for Green Homes (ICC)
  - Workshop 10: IECC Performing Residential Energy Inspections (ICC)
  - Workshop 11: Title 24 PEBI Energy Code Training (SCE Statewide C&S)

o Workshop 12: CALGreen Inspector Certification (ICC)
o Workshop 13: CALGreen Examiner Certification ICC)

Challenges
• No significant challenges were encountered in this task.

3.1.8   County of Ventura – Phase 1

Local Government Partnership: Ventura County Partnership

Project Title: Code Enforcement and Compliance Training for County Staff SCE Training Tools

Project Purpose: The goal of this task is to increase code compliance and raise the level of awareness of the importance of code compliance by Implementer's staff.

Project Scope and Components: The Implementer will develop and implement a training program on Title 24, Part 6, building energy efficiency compliance for county building officials and staff. Implementer will review and assess specifications of Title 24, Part 6 building energy efficiency enforcement training programs offered by the California IOUs and other related educational resources, and include in the Assessment and Planning Report for Building Energy Efficiency Compliance Training a summary of the findings of the assessment and justification for the use of all, none or a portion of these training resources.

> **Deliverables:**

1. Assessment and Planning Report for Building Energy Efficiency Compliance Training
2. Draft Building Energy Efficiency Compliance Training curriculum, materials (including participant survey) and schedule
3. Final Building Energy Efficiency Compliance Training curriculum, materials (including participant survey) and schedule
4. Draft Building Energy Efficiency Compliance Training promotion plan and materials
5. Final Building Energy Efficiency Compliance Training promotion plan and materials
6. Draft plan to share best practices and lessons learned with peer counties and cities
7. Final plan to share best practices and lessons learned with peer counties and cities
8. Six (6) Building Energy Efficiency Compliance Training Sessions

9. Building Energy Efficiency Compliance Training Implementation Report

10. Monthly report of tracked Performance Indicators

Date Approved (Advice Letter (NTP)): March 2011 (May 2011)

Date Completed (est.): Oct 2012   **Date Completed (actual):** Jan 2013

Estimated Cost: $53,000   **Final Program Cost:** $46,774

Local Match Contribution: $0

Project Reimbursed for LG Staff Time: Ⓨ / N

Program Budget Unspent: $0

Best Practices
• Facilities. The facilities used were well-lit (natural and artificial illumination), well-ventilated, easily accessible from major travel routes, comfortable, and accessible to the disabled.
• Accommodations. The lunch, as well as the mid-morning snacks that were provided to the attendees was excellent, and of the highest quality.
• The handouts and training materials were exceptional and very detailed. Many students commented that the materials will be useful in their day-to-day operations.
• The Implementer collaborated with the Ventura County Regional Energy Alliance (VCREA) to develop and implement code enforcement and compliance training to Implementer's staff. VCREA was an essential part in preparing materials and making necessary arrangements for training sessions. Each of the four topics presented were presented twice to different groups in order to ensure better saturation and access to all building department staff. Sessions included Implementer's building department staff as well as staff from city building departments around the Implementer's jurisdiction.

Lessons Learned
• Need to break the information and materials down into more chewable bites for the attendees due to the volume and complexity of the material. The volume of information and detail, variation and trade-offs, in Part 6 of Title 24 is such that even when separated into residential and non-residential, and further into new buildings and additions, a full days course for each of those separated discussions is not enough time to take in and comprehend this information.

Knowledge Transferred

- The target audience for these compliance training was enforcement staff from Ventura County Building and Safety Division, as well as staff from other local municipalities. So information will be used to train any future staff.

Next Steps

- Continue to send staff to training whenever there is any changes to codes.

Benefit to the State

- A knowledgeable workforce that will be able to implement and monitor any code changes.

Benefit to Local Government

- A knowledgeable workforce that will be able to implement and monitor any code changes. Know best way to implement code changes with local constituents.

Successes

- Developed and implemented code enforcement and compliance training for County staff.

- A total of six (6) training courses were implemented, two in partnership with SCE and the remaining in partnership with Ventura County Regional Energy Alliance. Training improved overall understanding of energy measures, forms and documents, proper installation of mandatory and voluntary measures, as well as provided information pertaining to SCE EE programs.

Challenges

- The Implementer faced the challenge of determining who was considered "an appropriate audience". Although the statement of work specified Implementer's staff, the Implementer felt that in order to fully realize the task goal, designers/practitioners must be included as well as a target audience.

  o Designers/Practitioners were incorporated as the target audience and thus benefited from this task.

  o Expanding the target audience to include designers/practitioners made the task more successful.

3.1.9 Western Riverside Council of Governments – Phase 2

Local Government Partnership: Western Riverside Council of Governments Energy Leader Partnership

Participating Municipalities: Calimesa, Canyon Lake, Hemet, Lake Elsinore, Menifee, Murrieta, Norco, Perris, San Jacinto, Temecula, and Wildomar

Project Title: Provide Technical Training to Jurisdictional Code Compliance Staff (or their Contract Staff) for Participating Municipalities

Project Purpose: Through this task the Implementer will develop a training program for building department staff that will impart the knowledge and provide the tools for properly enforcing new building codes and standards. Provide opportunities for city staff of Participating Municipalities to attend, a minimum of four code and standard training workshops per staff member.

Project Scope and Components: Implementer will provide classroom and field training to inspection staff for the following three building types: new residential buildings; residential additions/alterations; and new nonresidential buildings. Training topics include a comprehensive overview and field training during various phases of the construction process. Implementer will develop training curriculum, materials that provides focused classroom and field training of inspection staff for each typical project type (i.e. new single family homes, new multi-family homes, residential additions and alterations, and new nonresidential buildings).

> **Deliverables:**

1. Report on status of Implementer or Subcontractor to support the Task
2. Code Compliance Training Program Plan.
3. Report on revisions to Title 24 code enforcement forms and procedures for Participating Municipalities
4. Training Implementation Report
5. Monthly status report

Date Approved (Advice Letter (NTP)): December 2011 (December 2011)

Date Completed (est.): Oct 2012   **Date Completed (actual):** Nov 2013

Estimated Cost: $83,555   **Final Program Cost:** $1,173,196 ($2,061,593 Budget)

Local Match Contribution: $0

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

Program Budget Unspent: $888,397

Best Practices
• Using existing regional committees to promote energy efficiency workshops proved helpful in securing regional participation

Lessons Learned
• Training participants provided positive feedback for the workshops. In particular, there was a positive reaction to the comprehensive code compliance overview.
• If Implementer were to consider repeating the training, it would consider location carefully. The Implementer's area is quite large and some cities may find a different location more desirable.
• Implementer will also consider the length of the trainings, as well as whether trainings on consecutive days

Knowledge Transferred
• Participants learned beneficial information which can be instructed to other staff members from the same organization.
• Workshops are good training mechanism to provide to multiple jurisdictions with the same common goal.

Next Steps
• Participating inspection staff continues to identify workshops for Building Safety and Code Compliance staff for ongoing training opportunities.

Benefit to the State
• The State will benefit from this task through improved code compliance resulting from better trained code enforcement professionals at the Participating Municipality.

Increased code compliance can result in reduced energy use and GHG emissions.

- Implemented measure will aid with the reduction of greenhouse gas emissions (GHG's) such as AB 32.

Benefit to Local Government

- Such workshops will aid with the knowledge that is needed to help meet Title 24 standards for buildings.

Successes

- A total of 22 City staff from nine (9) cities attended Title 24 training workshops.

- The trainings targeted city employees who have frequent construction-related interaction with a local constituency.

- The Implementer developed a code compliance education program to train municipal staff on Title 24 and new "green" building codes. Workshops were conducted July 25 and 26, 2012.

  o The first day was a Comprehensive Overview – 2008 Nonresidential and Residential Standards. The session guided city staff through the processes that ensure building construction plans conform to Title 24 building codes. During the training, city personnel learned how to ensure that the proper plan and inspection check procedures are followed, making certain that the public is complying with the California Building Standard: Title 24 Energy Standards, accessibility codes, and other green building codes.

  o The second day comprised Field Training Workshops, where hands-on trainings were conducted. The plans for newly constructed residential buildings, additions, and nonresidential buildings were reviewed and inspections of those facilities were conducted.

Challenges

- No significant challenges were encountered in this task.

3.2 Strategic Plan Task 2.1.2 – Redesign Code Compliance and Enforcement Processes

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

No work solicited for this task in 2010-2012

4.   Strategic Plan Goal 3 - Lead by Example

"Local Governments Lead by Example with their own Facilities and Energy Usage Practices"

4.1   Strategic Plan Task 3.1.1 – Local Government Benchmarking Policies

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

4.1.1   Coachella Valley Association of Governments – Phase 1

Local Government Partnership: Desert Cities Partnership

Participating Municipalities: Blythe, Cathedral City, Desert Hot Springs, Indian Wells, Palm Springs, Rancho Mirage, and the Agua Caliente Band of Cahuilla Indians

Project Title: Energy Benchmarking Policy and Procedures for Municipal Facilities

Project Purpose: Develop an Energy Benchmarking Policy and associated procedures that will be adopted. The policy and procedures will provide the framework to continue to implement benchmarking and how to use benchmarking to identify energy efficiency opportunities and impacts.

Project Scope and Components: The Implementer will develop energy benchmarking policy and procedures to enable ongoing energy benchmarking of the facilities ("Benchmarking Policy and Procedures") for each Participating Municipality.

> **Deliverables:**

1. Benchmarking Assessment and Planning Report
2. Draft Benchmarking Policy and Procedures
3. Final Benchmarking Policy and Procedures
4. Report on Benchmarking Policy and Procedures Stakeholder Input
5. For each Participating Municipality - Resolution adopting Benchmarking Policy and Procedures or documentation of why Benchmarking policy and Procedures was not adopted and related alternate plans
6. Draft Benchmarking Policy Best Practices Report
7. Final Benchmarking Policy Best Practices Report

8. Draft benchmarking information dissemination plan

9. Final benchmarking information dissemination plan

10. Monthly reports of tracked Performance Indicators

Date Approved (Advice Letter (NTP)): December 2011

Date Completed (est.): Aug 2012   **Date Completed (actual):** Fall 2014

Estimated Cost: $388,500   **Final Program Cost:** $3,924,823 ($4,915,380 Budget)

Local Match Contribution: $0

Project Reimbursed for LG Staff Time: Ⓨ / N

Program Budget Unspent: $990,557

Best Practices
• Two of our participating cities were able to achieve Energy Star certification for their city hall buildings. The City Councils were recognized for their efforts at a ceremony that featured a presentation by the EPA of an Energy Star award.
• Benchmarking city buildings as a sample to show how Portfolio Manager works gave jurisdictions a hands on demonstration of the benefits of benchmarking.
• A building energy benchmarking policy to track and rank energy usage for major facilities. This tool will allow for the targeting of energy efficiency projects and tracking savings of implemented projects.

Lessons Learned
• The actual benchmarking process was a fairly quick process
• Gathering facility information was a time consuming task. Many of the jurisdictions did not have the required details on their electric meters and associated loads, facility space types and the associated operation characteristics readily available.
• When the Participating Municipalities were customizing their policies, it was helpful to facilitate the policy selection by presenting a list of options from easiest to most difficult actions to implement. The policy development team also presented the recommended option based on knowledge of the building inventory and jurisdiction resources. The Participating Municipalities agreed with and selected most of the recommended options presented.
• Portfolio Manager does not have a building type category for most of the building types that are typical of a municipality and therefore many of the Participating

Municipalities' buildings are not eligible to receive an Energy Star Rating. Many buildings had to be labeled under the "Other" category but the team was consistent in categorizing police stations, fire stations in the "Other" category.

- Having a "hands-on" benchmarking workshop gave the Participating Municipalities a better understanding of the benchmarking process. Many thought the benchmarking system would be useful to their cities.

  - Having a benchmarking workshop opened a dialogue for questions and concerns that helped mold the policy. Key discussions addressed the following topics

  - Flexibility to modify the policy

  - Information sharing between the jurisdictions with Portfolio Manager?

  - How does the policy support jurisdictions with many small buildings?

  - The process for a city to benchmark multi-building properties

  - Implementing a Voluntary or Mandatory Policy

Knowledge Transferred

- Through the Energy Leader Partnership, the Implementer has disseminated Green for Life program information to partners including the Coachella Valley Economic Partnership, Desert Valleys Builders Association, local water districts, and other local governments not served by SCE. We will continue to share information through our Green for Life website, articles in jurisdiction newsletters and websites, outreach events, presentations to community groups, and media/social media outreach.

Next Steps

- Continue to look for opportunities to promote benchmarking and expand the list of Energy Star buildings in our region.

Benefit to the State

- This task promoted the benefits of benchmarking which most participants were unfamiliar with when the program started. Educated our region about benchmarking and the California Long Term Energy Efficiency Strategic Plan (CLTEESP).

Benefit to Local Government

Participating Municipalities are able to:

- Benchmark facilities relative to their past performance

- View percent improvement in weather-normalized source energy

- Monitor and trend electric costs

- Reporting on rankings, electric usage and electric costs

- Customized operating characteristics tailored to each space use category within each building.

- Customized meter names and key information

- Ability to also track natural gas and water meters for each facility

Successes

- Implementer developed energy benchmarking policies and procedure for each of the Participating Municipalities, each of whom adopted the policy and procedures.

- The Benchmarking Policy identifies the eligible city-owned buildings that would be guided by the policy, the use of the EPA's Portfolio Manager as the benchmarking tool, and the actions that the Participating Municipality would consider for various baseline benchmarking scores for the individual buildings.

Challenges

- Some problems related to climate zones were discovered after Portfolio Manager setup was completed. The errors in Portfolio Manager in one case caused a very low score for one building of a Participating Municipality that had done a lot to improve efficiency. Implementer worked with EPA to adjust the incorrect data in Portfolio Manager so that appropriate benchmarking scores were obtained. Ultimately, the building with the low score received an Energy Star rating (over 75).

4.1.2   City of El Segundo – Phase 1

Local Government Partnership: South Bay Partnership

Project Title: Develop Benchmarking Policy and Implement a Sample Benchmarking Analysis

Project Purpose: The goal of energy benchmarking is to have a more complete understanding of the energy usage of each of Implementer's buildings so energy bills can be better managed. Through the development of this policy the Implementer will determine the conditions that affect energy efficiency and which facilities may need further studies to gain greatest possible energy efficiency.

Project Scope and Components: Develop a Benchmarking Policy and Implement a Sample Benchmarking Analysis: Implementer will develop a benchmarking policy and implement benchmarking analysis on a sample of Implementer's facilities.

Deliverables:

1. Report on status of Implementer or Subcontractor to support the Task
2. Plan for both developing the benchmarking policy and implementing the benchmarking analysis
3. Benchmarking policy
4. Report on implementation of the benchmarking analysis
5. Monthly status report

Date Approved (Advice Letter (NTP)): March 2011 (April 2011)

Date Completed (est.): October 2011   **Date Completed (actual):** November 2012

Estimated Cost: $57,000   **Final Program Cost:** $454,153 (486,500 Budget)

Local Match Contribution: $0

Project Reimbursed for LG Staff Time: Ⓨ / N

Program Budget Unspent: $32,347

Best Practices
• Through the implementation of this task (Develop and adopt an Energy Benchmarking Policy) the following best practices were used as a guiding standard.
• Utilize a well know and reliable software program that automate end-to-end data retrieval and reporting. The implementer utilized the EPA's Energy Star Portfolio Manager.
• Define how benchmarking information will be utilized internally. The city decided to use benchmarking information to help guide prioritize of future energy efficiency projects for those facilities identified as underperforming.
• Tie benchmarking to other goals or strategies within the city's energy programs.

Lessons Learned
• **Engage all stakeholders at the beginning of the program to gain early buy-in.**

Many of the tasks required intra-departmental and inter-departmental support from Staff not previously familiar with the overall goal and intent of the program. This lack of familiarity caused challenges and delays with the implementation of tasks. In the future, the Implementer would invite key staff from various departments to participate in energy management and planning discussions to ensure transparent communication of the City's energy reduction objectives.

Knowledge Transferred

- Utilizing the EPA's Energy Star Portfolio to benchmarking municipal facilities (a) helps populate additional buildings into the database for other cities to compare again and (b) without the effort undertake with this task municipal staff would have had another way in which to grade the performance of their facilities.

Next Steps

- Implementer will continue to utilize the efforts from benchmarking to municipal facilities to track and monitor ongoing energy usage and update performance of facilities through Energy STAR Portfolio.

Benefit to the State

- Local governments integrating energy efficiency in their municipal operations align with the state's "loading order" of first addressing energy efficiency as California's top priority resources.

Benefit to Local Government

- Benchmarking and the benchmarking policy will be used as a tracking tool to identify facilities scoring lower than 50 and needing to improve energy performance.

Successes

- The Implementer developed and adopted a benchmarking policy for municipal facilities. The Benchmarking Policy is limited to enclosed Implementer-owned buildings or for buildings which the Implementer regularly pays all or part of the annual energy bills as specified by the Department of Public Works. Key aspects of the Benchmarking Policy are:

  - Benchmarking data is factored into prioritization of municipal building energy efficiency improvement projects.

  - Benchmarking data is used to monitor and evaluate changes in energy

consumption after implementing retro-commissioning and other energy efficiency measures.

- o Benchmarking data will be used to track and document progress towards established municipal energy reduction targets.

- An account with Portfolio Manager was established along with the adoption of an energy benchmarking policy.

- The Implementer will lead by example by publishing energy consumption metrics for their benchmarked facilities.

Challenges

- No significant challenges were encountered in this task.

4.1.3   County of Inyo – Phase 1

Local Government Partnership: Eastern Sierra Partnership

Project Title: Develop Energy Benchmarking Policies and Procedures to Enable Ongoing Benchmarking of All Local Government Facilities.

Project Purpose: Develop energy benchmarking policies and procedures to enable ongoing benchmarking of all local government facilities. This policy will enable the Implementer to track energy use and emissions for Implementer's facilities and activities.

Project Scope and Components: Develop energy benchmarking policies and procedures to enable ongoing benchmarking of all local government facilities. The benchmarking framework will be based on ENERGY STAR Portfolio Manager ("Portfolio Manager") which will be used to evaluate existing and projected energy use for all qualifying county facilities. These benchmarks will set a baseline of energy consumption and costs that will be used to develop strategies for energy reduction and provide direction for cost savings. Implementer's facilities that are larger than 4,500 square feet (sf) will be entered into the Energy Star Portfolio Manager to be evaluated for energy use baselines and benchmarking. Implementer may consider publishing the energy data in an online database that is accessible to the public to provide an easy way for Staff and the public to review the data, see the progress of this planning effort, as well as communicate achievements in meeting energy reduction goals.

   Deliverables:

1. Benchmarking Assessment and Planning Report
2. Draft Benchmarking Policy and Procedures
3. Report on Stakeholder Input: Benchmarking Policy and Procedures
4. Final Benchmarking Policy and Procedures
5. Submit Benchmarking Policy and Procedures to Board of Supervisors for consideration
6. Monthly status reports
7. Report on Benchmarking: Best Practices and Lessons Learned

Date Approved (Advice Letter (NTP)): March 2011 (March 2011)

Date Completed (est.): October 2012   **Date Completed (actual):** November 2012

Estimated Cost: $13,966   **Final Program Cost:** $174,795 ($173,028 Budget)

Local Match Contribution: $0

Project Reimbursed for LG Staff Time: Y / N

Program Budget Unspent: $0

Best Practices
• The National Association of Counties (NACo) contacted the Implementer and offered assistance with Portfolio Manager set up. NACo created a Portfolio Manager account for the Implementer. • Use the Automated Benchmarking System (ABS) offered by the California IOUs to facilitate ongoing data transfer to Portfolio Manager from the IOUs.

Lessons Learned
• Select a benchmarking program that makes the most sense for your jurisdiction's specific needs and do not be overly wowed by programs with lots of bells and whistles that are not necessary or practical. • Assess the costs of what you get from particular programs with your jurisdiction's specific needs. • Allow a lot of time to find and collect energy use data. This process was, by far, the most time consuming, and frustrating of everything we did for this project. We ended up having to send staff out in the field to collect meter numbers for the SCE automated system. We also waited close to three months to get our utility use and billing data from Los Angeles Department of Water and Power ("LADWP").

- Do not forget that you will also need to collect gas use data. If your facilities also use natural or LP gas this can mean going to a variety of suppliers for these data. This is necessary for a complete benchmarking analysis. This caught the project team by surprise. Collecting LP gas data late in the data gathering stage set caused a delay in completing the benchmarking analysis.

- Be flexible, the data often comes in formats that are not the easiest to understand and do not be afraid to contact your utility companies repeatedly for clarification. Eventually, you are likely to find a helpful staff person to talk you through it.

- Implementer staff that is already trained on Portfolio Manager will also help with training additional County staff.

Knowledge Transferred

- This document serves as the primary mechanism of conveying best practices and lessons learned from this task. However, the implementer is available to discuss this further with any interested parties.

Next Steps

- Continue monitoring/benchmarking county facilities annually.

Benefit to the State

- The State will benefit from this task because the end result is that energy will be saved, thereby reducing GHG emissions. Benchmarking, and related activities, is often the first step in identifying energy reduction opportunities. By adopting and implementing benchmarking policies and procedures the Local Government has established a path to managing and reducing its energy use.

Benefit to Local Government

- Very low cost – free web based Utility Manager System, automatic data streaming for continuous update of the baseline for each building.

Successes

- Employed the Energy Star Portfolio Manager to benchmark key County facilities.
  - o Resulted in a sustainable process and system implementation (Portfolio Manager with Automated Benchmarking System (ABS) data transfer).

- Created policies based on the information gathered.

- Policies passed by County Board

- A successful path to developing policies was to develop policies that meet the goals of the Board of Supervisors first, and then adjust them to meet the goals of the Strategic Plan.

Challenges

- This collection of data was, by far, the most time consuming, and frustrating of everything the Implementer did for this project. They had to send staff out in the field to collect meter numbers for the SCE automated system. They also waited close to three months to get our utility use and billing data from Los Angeles Department of Water and Power ("LADWP").

- The data comes in formats that are not the easiest to understand.

4.1.4   City of San Bernardino – Phase 2

Local Government Partnership: Community Energy Partnership

Project Title: Develop and Adopt Energy Benchmarking Policy

Project Purpose: Implementer will develop an energy benchmarking policy that will help Implementer identify opportunities for improving the energy efficiency of its facilities.

Project Scope and Components: The Implementer will develop a benchmarking policy and quantify the impact of various energy-saving programs, policies, and procedures undertaken by the Implementer.

Deliverables:

1. Report on status of Implementer or Subcontractor to support the task

2. Assessment and planning report for both developing the benchmarking policy and quantifying the impact of energy-savings programs

3. Report on the implementation of quantifying the impact of energy-savings programs

4. Draft and final benchmarking policy; final plan presented to city council for adoption; if not adopted, preparation of memorandum explaining reasons for rejection and alternative plans

5. Report on benchmarking outreach activities

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6. Monthly status report

Date Approved (Advice Letter (NTP)): March 2011

Date Completed (est.): November 2012   **Date Completed (actual):** July 2013

Estimated Cost: $55,450   **Final Program Cost:** $258,468 ($512,620 Budget)

Local Match Contribution: $0

Project Reimbursed for LG Staff Time: Ⓨ / N

Program Budget Unspent: $254,152

Best Practices
• Incorporated staff education related to benchmarking. Staff education will be essential to the acceptance and implementation of the benchmarking policy to establish a thorough understanding of the purpose of benchmarking and its role in the Implementer's Strategic Plan. To facilitate this educational process, an instructional manual was created and incorporated in to the benchmarking policy. The manual provides direct instruction on the benchmarking process and staff was informed about the online portal that must be used by staff to benchmark buildings.
• Reviewed and assessed local government benchmarking policies. Reviewing other local government benchmarking policies allowed the city to identify best practices to incorporate into the Implementer's policy (e.g. frequency of reporting benchmarking data, process to integrate data into Implementer operations). The developed criteria will enable Implementer to move forward with their benchmarking policy in an efficient manner.
• The use of the Environmental Protection Agency (EPA) Energy Star Portfolio Manager. There are numerous benchmarking tools in the market. Many of these tools charge a fee and provide Energy Star Portfolio Manager's information along with added information about a building's energy use. Using the Energy Star Portfolio Manager, however, does not entail a direct cost and provides valuable information to the City. It is one of the most comprehensive and widely adopted tools used today.

Lessons Learned
• Addressed the integration of the policy into Implementer's operations with limited resources. The practical application of the benchmarking policy was a concern for Staff due to limited resources. As a result, a more simplified policy format was created while shortening the policy itself. In addition, an Annual Benchmarking Report section was added to the policy to facilitate the tracking of benchmarked buildings.

- Supported new concepts with proper education Benchmarking was a fairly new concept to Staff. Educating them about benchmarking was critical to have full support from the Staff and decision-makers to move forward with the policy. In addition, implementing a new objective that Staff must undertake may seem burdensome to a Local Government with limited resources. Therefore, a gradual transition or adoption of a new goal or objective may be necessary at times so as not to overwhelm personnel and allow them to adjust resources accordingly over time.

Knowledge Transferred

- This document serves as the primary mechanism of conveying best practices and lessons learned from this task. However, the implementer is available to discuss this further with any interested parties.

Next Steps

- There are no Strategic Plan activities currently planned for the City of San Bernardino. However, the City of San Bernardino will continue to pursue Strategic Plan activities through the Community Energy Leader Partnership.

Benefit to the State

- The State will benefit from this task because the end result is that energy will be saved. Benchmarking and related activities is often the first step in identifying energy reduction opportunities. By adopting and implementing benchmarking policies and procedures the Local Government has established a path to managing and reducing its energy use.

Benefit to Local Government

- The local government will benefit from this task because the end result is that energy will be saved. Benchmarking and related activities is often the first step in identifying energy reduction opportunities. By adopting and implementing benchmarking policies and procedures the Local Government has established a path to managing and reducing its energy use and energy costs.

Successes

- The Implementer developed and adopted a benchmarking policy to be used by the Implementer that will guide the local government to benchmark all government-owned buildings. The expectation of this task was to facilitate the development and adoption of such policy so that Implementer is able to understand the buildings' current energy

> usage. Through this understanding, Implementer's operation staff will be able to set goals for building energy reduction.

Challenges
• Addressed the integration of the policy into Implementer's operations with limited resources. The practical application of the benchmarking policy was a concern for Staff due to limited resources. As a result, a more simplified policy format was created while shortening the policy itself. In addition, an Annual Benchmarking Report section was added to the policy to facilitate the tracking of benchmarked buildings.

4.1.5   County of Santa Barbara – Phase 2

Local Government Partnership: South Santa Barbara Partnership

Project Title: Develop Energy Benchmarking Policy

Project Purpose: The purpose of the Energy Benchmarking Policy is to enable the Implementer to understand the relative energy efficiency of the buildings operated by the Implementer, set energy savings goals, and regularly evaluate progress. It was also the intent of the Implementer to regularly benchmark its energy usage to measure progress on a building level towards the Implementer's energy and greenhouse gas goals, and to prioritize building upgrade opportunities that will best achieve the goals of the plan.

Project Scope and Components: The Implementer will develop and adopt an energy benchmarking policy for all its municipal buildings. The benchmarking policy will describe the benchmarking process, including the systematic categorization of all municipal buildings, address the frequency of data updates, and clearly establish the implementation process to assure the data is integrated into the Implementer's operational decisions.

   Deliverables:

1. Benchmarking Policy Assessment and Planning Report
2. Draft Benchmarking Policy
3. Final Benchmarking Policy
4. Report on Benchmarking Policy Stakeholder Input
5. Documentation of adoption of Benchmarking Policy or documentation of why Benchmarking Policy was not adopted and related alternate plans

6. Draft plan to share best practices and lessons learned with other local governments

7. Final plan to share best practices and lessons learned with other local governments

8. Monthly report of tracked Performance Indicators

Date Approved (Advice Letter (NTP)): December 2011

Date Completed (est.): November 2012   **Date Completed (actual):** April 2013

Estimated Cost: $79,347   **Final Program Cost:** $421,998 ($492,766 Budget)

Local Match Contribution: $0

Project Reimbursed for LG Staff Time: Ⓨ / N

Program Budget Unspent: $70,768

Best Practices
• Under the guidance of the Implementer's Energy Manager, the Implementer utilized the industry standard EPA ENERGY STAR Portfolio Manager to benchmark certain Implementer-owned buildings on a regular basis.

Lessons Learned
• **ENERGY STAR does not offer scores for buildings such as fire stations and jails**. The Portfolio Manager tool could have been better leveraged if these scores existed. Instead, what the Implementer is doing is relying more on the data being pulled from the installed sub-meters. The lessons learned was that while scores are important to assess progress, a strategic plan must include other tools that assess the building's energy usage.
• **Campus-type facilities pose problems with Benchmarking.** Another challenge encountered was figuring out how to treat the buildings on campuses, which are being served by one master meter. We learned that ENERGY STAR Portfolio Manager is not a good tool for this set-up and thus it was difficult for the Implementer to assess the energy performance of what appeared to be, the buildings with the highest energy and water consumption. This was resolved through a few work-arounds. First, the Implementer installed sub-meters in a few buildings located at the Implementer's largest master-meter campus. Next, the Implementer only entered data on buildings with individual meters.
• **Limited building types that can receive an ENERGY STAR score.** For example, the Implementer was able to generate scores for only its office buildings. Other Implementer buildings such as police, city hall, jail, etc. do not receive scores.

Knowledge Transferred
• This document serves as the primary mechanism of conveying best practices and lessons learned from this task. However, the implementer is available to discuss this further with any interested parties.

Next Steps

• The County of Santa Barbara pursued the following tasks for the 2013-2014 Strategic Solicitation Pilot:
 	
    o Green Building Code
 	
    o Energy Efficiency Revolving Fund

Benefit to the State
• The State will benefit from this task because the end result is that energy will be saved. Benchmarking and related activities is often the first step in identifying energy reduction opportunities. By adopting and implementing benchmarking policies and procedures the Local Government has established a path to managing and reducing its energy use.

Benefit to Local Government
• The Implementer has used the Benchmarking, Utility Manager and RCx Policy to identify high energy users and make improvements. • One of the first buildings to be identified as a poor performer, as a result of its ENERGY STAR score, became the first building to undergo an RCx assessment.

Successes
• The Board of Supervisors approved the Benchmarking Policy in April 2013. • The Implementer developed and adopted a benchmarking policy. Under the guidance of the Implementer's Energy Manager, the Implementer shall utilize the EPA's ENERGY STAR Portfolio Manager to benchmark certain Implementer-owned buildings on a regular basis. The Implementer will implement this policy across north and south of Implementer's region and ensure consistency with the Implementer's Sustainability Plan. Roles and responsibilities of affected departments are defined in the policy. • The Benchmarking policy was completed in September 2012

Challenges
• ENERGY STAR does not offer scores for buildings such as fire stations and jails.
• Campus-type facilities pose problems with Benchmarking.
• Limited building types that can receive an ENERGY STAR score.

4.1.6   City of Simi Valley – Phase 1

Local Government Partnership: Simi Valley Partnership

Project Title: Develop Benchmarking Policy and Quantify Impact of Energy-Savings Programs

Project Purpose: Develop a Benchmarking Policy for adoption by Implementer that will establish the process and procedures for benchmarking all municipal facilities.

Project Scope and Components: The Implementer will develop a benchmarking policy and quantify the impact of various energy-saving programs, policies, and procedures undertaken by the Implementer. Implementer will also develop presentations to disseminate the benchmarking policies and analysis to other groups.

   Deliverables:

1. Plan for both developing the benchmarking policy and quantifying the impact of energy-savings programs
2. Report on the implementation of quantifying the impact of energy-savings programs
3. Draft and final benchmarking policy
4. Report on benchmarking outreach activities
5. Monthly status report

Date Approved (Advice Letter (NTP)): March 2011 (March 2011)

Date Completed (est.): January 2012   **Date Completed (actual):** December 2013

Estimated Cost: $18,070   **Final Program Cost:** $125,495 ($130,000 Budget)

Local Match Contribution: $0

Project Reimbursed for LG Staff Time: Y / N

Program Budget Unspent: $0

Best Practices
• Through the development of this policy, Staff can measure and evaluate current energy use for Implementer-owned buildings and Implementer-provided services, and compare this energy use to past energy use to make sure building energy use is appropriate, identify opportunities to increase energy efficiency, and reduce energy costs and greenhouse gas emissions.
• The benchmarking policy has developed operations and maintenance procedures for staff to implement. Facilities that have been benchmarked will be able to track pre and post implementation energy usage to assess the variance between estimated and actual energy savings realized.

Lessons Learned
• The need to adequately estimate the amount of staff time required to implement tasks and track budget issues was a key concern.
• The tasks required communication and support from various staff in several departments who were not previously familiar with benchmarking and its value. This lack of familiarity caused challenges and delays with implementing parts of the tasks.
• Through the process, City staff increased knowledge of benchmarking resources made available through public and private entities. Many of these resources are free to access and can support our sustainability objectives. The Implementer will access these resources (some noted in Section 3.4) to provide useful outreach to staff on best practices and lessons learned from other local and state government agencies.

Knowledge Transferred
• The Implementer will share the results of this task by disseminating a menu of quantified energy-saving programs, benchmarking policies, or procedures to other communities and facility managers.

Next Steps

• The City of Simi Valley pursued the following tasks for Phase 2 of the 2010-2012 Strategic Solicitation Pilot:
   o Green Building Codes
   o Online Permitting System

- o   Voluntary Green Building Policy

- o   Code Compliance Workshops

- o   Benchmarking Policies

- o   Energy Action Plan/Climate Action Plan

- o   Commissioning/Retro-commissioning Policy

- o   EE Savings Analysis

Benefit to the State

- The State will benefit from this task because the end result is that energy will be saved. Benchmarking and related activities is often the first step in identifying energy reduction opportunities. By adopting and implementing benchmarking policies and procedures the Local Government has established a path to managing and reducing its energy use.

Benefit to Local Government

- The Implementer will be better positioned to identify under-performing facilities and direct resources to improve performance of these buildings

- Staff is tracking usage of highest energy consuming buildings for the purpose of identifying opportunities for improvements in energy use, and developing projects for City Council approval and implementation.

Successes

- An Energy Benchmarking Policy that included baseline benchmarks and easily followed procedures for eight main municipal facilities was approved by City Council.

Challenges

- The Implementer needed to designate an employee or department to manage the procedures identified in the policy

4.1.7   City of Simi Valley – Phase 2

Local Government Partnership: Simi Valley Partnership

Project Title: Integrate Benchmarking Policy with Results from the Utility Manager Program

Project Purpose: By developing a process to better integrate energy usage data and perform benchmarking, the Implementer will be able to improve the monitoring and management of its energy usage and practices in its own facilities. This will enable the Implementer to take steps towards achieving higher levels of EE as a model to the community.

Project Scope and Components: Implementer will integrate the results from the Utility Manager program with the benchmarking policy to identify opportunities and strategies to increase energy efficiency in Implementer's facilities. This integration will address the following issues:

- The energy efficiency performance of Implementer's facilities;
- Can the energy efficiency performance of Implementer's facilities be improved by using more efficient technologies;
- Are there operational ways in which energy efficiency performance can be improved;
- Does Implementer's policies and organizational structure support effective energy management; and
- Which of Implementer's facilities, if any, need further investigation?

 Deliverables:

1. Report on status of Implementer or Subcontractor to support the Task
2. Plan for integrating the benchmarking policy with the results from the Utility Manager program
3. Report on integrating the benchmarking policy with the results from the Utility Manager software program
4. Monthly status report

Date Approved (Advice Letter (NTP)): December 2011

Date Completed (est.): December 2012   **Date Completed (actual):** November 2012

Estimated Cost: $57,000   **Final Program Cost:** $611,356 ($389,500 Budget)

Local Match Contribution: $0

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

Program Budget Unspent: $0

Best Practices
• Through the development of this policy, Staff can measure and evaluate current energy use for Implementer-owned buildings and Implementer-provided services, and compare this energy use to past energy use to make sure building energy use is appropriate, identify opportunities to increase energy efficiency, and reduce energy costs and greenhouse gas emissions. • The benchmarking policy has developed operations and maintenance procedures for staff to implement. Facilities that have been benchmarked will be able to track pre and post implementation energy usage to assess the variance between estimated and actual energy savings realized.

Lessons Learned
• To address limited resources and limited roles, the Implementer assigned several key staff in different departments to track various parts of the program.

Knowledge Transferred
• This document serves as the primary mechanism of conveying best practices and lessons learned from this task. However, the implementer is available to discuss this further with any interested parties.

Next Steps
• Staff is tracking usage of main facilities and identifying energy use anomalies and underperforming facilities, so that changes can be made.

Benefit to the State
• The State will benefit from this task because the end result is that energy will be saved. Benchmarking and related activities is often the first step in identifying energy reduction opportunities. By adopting and implementing benchmarking policies and procedures the Local Government has established a path to managing and reducing its energy use.

Benefit to Local Government
• The Implementer is better positioned to identify under-performing facilities and direct

resources to improve performance of these buildings

Successes
• The Implementer developed an Energy Benchmarking Policy that was approved by City Council.
• The Utility Manager program, EEMIS, was not fully developed and tracking energy use at the Implementer's main facilities until late 2013. The Benchmarking Policy completion preceded this by over a year, but included a plan to use the EEMIS data in benchmarking the facilities.
o Staff is currently evaluating EEMIS data records available for the past four years and identifying performance creep in facilities.
• The Benchmarking Policy was begun under Phase I of the Strategic Plan and finished under Phase II.

Challenges
• The Implementer needed to designate an employee or department to manage the procedures identified in the policy.
o To address limited resources and limited roles, the Implementer has assigned several key staff in different departments to track various parts of the program.

4.1.8   City of South Gate – Phase 1

Local Government Partnership: South Gate Partnership

Project Title: Energy Benchmarking Policy

Project Purpose: Develop a Benchmarking Policy for approval of City Manager that will establish the process and procedures for benchmarking all municipal facilities. With benchmarking Implementer will have a more complete understanding of the energy usage of each of our buildings so utility bills can be better managed.

Project Scope and Components: Implementer will develop and facilitate the adoption by the Implementer of an energy benchmarking policy and process for all its municipal buildings ("Benchmarking Policy"). The policy will describe the benchmarking process that will be undertaken and the systematic categorization process for all municipal buildings to enable

efficient benchmarking, address how frequency of data updates, and clearly identify the implementation process to assure the data is integrated into Implementer's operations.

Deliverables:

1. Benchmarking Policy Assessment and Planning Report

2. Draft Benchmarking Policy

3. Final Benchmarking Policy

4. Report on Benchmarking Policy Stakeholder Input

5. Documentation of approval of Benchmarking Policy by City Manager or documentation of why Benchmarking Policy was not approved and related alternate plans

6. Draft plan to share best practices and lessons learned with other local governments

7. Final plan to share best practices and lessons learned with other local governments

8. Monthly report of tracked Performance Indicators

Date Approved (Advice Letter (NTP)): March 2011 (May 2011)

Date Completed (est.): October 2012 **Date Completed (actual):** May 2013

Estimated Cost: $57,000 **Final Program Cost:** $887,332 ($886,000 Budget)

Local Match Contribution: $0

Project Reimbursed for LG Staff Time: Ⓨ / N

Program Budget Unspent: $0

Best Practices
• Incorporated staff education and training related to benchmarking. Staff education was critical to the development of the benchmarking policy to establish a thorough understanding of the purpose of benchmarking and its role in the Implementer's Strategic Plan. An instructional manual was created; a demonstration of the online portal that must be used by staff to benchmark buildings; and an informational sessions were provided.
• Reviewed and assessed local government benchmarking policies. Reviewing other local government benchmarking policies allowed the city to identify best practices to incorporate into the imp's policy (e.g. frequency of reporting benchmarking data, process to integrate data into Implementer operations). The developed criteria will enable Implementer to move forward with their benchmarking policy in an efficient manner.

- The use of the Environmental Protection Agency (EPA) Energy Star Portfolio Manager. There are numerous benchmarking tools in the market. Many of these tools charge a fee and provide Energy Star Portfolio Manager's information along with added information about a building's energy use. Using the Energy Star Portfolio Manager, however, does not entail a direct cost and provides valuable information to the Implementer. It is one of the most comprehensive and widely adopted tools used today.

Lessons Learned

- Addressed the integration of the policy into Implementer's operations with limited resources. The practical application of the benchmarking policy was a concern for Implementer staff due to limited resources. As a result, a more simplified policy format was created while shortening the policy itself. In addition, a Benchmarking Report section was added to the policy to facilitate the tracking of benchmarked buildings.

- Supported new concepts with proper education. Benchmarking was a fairly new concept to Implementer staff. Educating them about benchmarking was critical to have full support from the Implementer to move forward with the policy. In addition, implementing a new objective in which Implementer staff must undertake may seem burdensome to an Implementer with limited resources. Therefore, a gradual transition or adoption of a new goal or objective may be necessary at times so as not to overwhelm personnel and allow them to adjust resources accordingly over time.

- Include all stakeholders at the beginning to gain early buy-in. Many of the tasks required intra-departmental and inter-departmental support from staff there were not previously familiar with the program. This lack of familiarity caused challenges and delays with implementing some tasks.

Knowledge Transferred

- This document serves as the primary mechanism of conveying best practices and lessons learned from this task. However, the implementer is available to discuss this further with any interested parties.

Next Steps

- Staff will track usage of highest energy consuming buildings for the purpose of identifying energy use anomalies and underperforming facilities.

Benefit to the State

- The State will benefit from this task because the end result is that energy will be saved. Benchmarking and related activities is often the first step in identifying energy

> reduction opportunities. By adopting and implementing benchmarking policies and procedures the Local Government has established a path to managing and reducing its energy use.

Benefit to Local Government

- The Implementer is now better positioned to target underperforming facilities with improved allocation of resources.

Successes

- The Implementer developed an Energy Benchmarking Policy that was approved by City Council.

- Trained staff on benchmarking tools such as ENERGYSTAR Portfolio Manager.

- The Implementer has created an active account with ENERGY STAR Portfolio Manager and is currently tracking the energy usage of 10 of the highest energy consuming buildings.

Challenges

- The impact of the policy would be diminished without assigning responsibility.
  - The Implementer needed to designate an employee or department to manage the procedures identified in the policy.

4.1.9   Western Riverside Council of Governments – Phase 2

Local Government Partnership: Western Riverside Council of Governments Energy Leader Partnership (WRELP)

Participating Municipalities: Calimesa, Canyon Lake, Hemet, Lake Elsinore, Menifee, Murrieta, Norco, Perris, San Jacinto, Temecula, and Wildomar

Project Title: Develop and Adopt Energy Benchmarking Policies for Participating Municipalities

Project Purpose: This task will ensure that participating municipalities are systematically tracking and analyzing their own energy usage as the first step towards energy efficiency action, which will set a standard of action for the community.

Project Scope and Components: The Implementer will develop a benchmarking policy and procedures to propose to Participating Municipalities for adoption in all city facilities, and establish a program for ongoing benchmarking. The system for ongoing benchmarking will be identified and established using the Environmental Protection Agency's (EPA) Energy Star® Portfolio Manager (software).

Deliverables:

1. Report on Status of Implementer or Subcontractor to Support the Task
2. Plan for developing the benchmarking policy
3. Draft and final benchmarking policy and procedures.
4. Report on benchmarking outreach activities and staff training results
5. Monthly status report

Date Approved (Advice Letter (NTP)): December 2011 (December 2011)

Date Completed (est.): Oct 2012   **Date Completed (actual):** May 2013

Estimated Cost: $574,000   **Final Program Cost:** $1,173,196 ($2,061,593 Budget)

Local Match Contribution: $0

Project Reimbursed for LG Staff Time: Ⓨ / N

Program Budget Unspent: $888,397

Best Practices

• Depending on the number of buildings and available resources, each Participating Municipality must determine which building(s) would be subject to the Benchmarking Policy. Some Policies may want to include all buildings or just those over a certain size threshold. It is important to know the energy configuration of the building and whether the building is individually metered, sub-metered, or is part of a campus where multiple buildings are fed through a master meter. Developing criteria to select the types of buildings to benchmark will help prioritize which buildings to benchmark first.
 	
    o Some criteria to consider include:
 	
        ▪ Building size
 	
            • All buildings,
 	
            • Buildings greater than a certain size, e.g., 1,000 square feet or 5,000 square feet, etc.

- Energy configuration

  - Determine the energy configuration of each building and see if the building is individual metered or a campus with several buildings fed through a master meter for electricity and natural gas (as applicable). Determine if any of the campus buildings are sub-metered. Determine if the buildings have other sources of energy (on-site solar, propane, etc.) since all energy sources needs to be accounted for in order to benchmark.

- Availability of data on the buildings to be benchmarked

Lessons Learned

- If select buildings are benchmarked initially, determine which buildings will benefit the most from benchmarking. For instance, buildings can be prioritized for benchmarking based on:

  o The heaviest energy users

  o Individually metered buildings

  o The highest energy costs

  o A specific building type (Office, Police Station, City Hall, etc.)

  o The highest energy user on a square foot basis

  o The greatest operating hours, etc.

- One Participating Municipality owned and operated many buildings so they:

  o Prioritized the buildings jurisdictional staff benchmarked by selecting the highest annual energy users first.

  o Staff then evaluated the energy use and energy costs on a square foot basis and ranked similar buildings on energy use per square foot.

  o With the benchmarking results, staff could target buildings that were the highest energy users on a square foot basis to determine why the buildings were using so much more energy than other jurisdictional facilities, regardless of the total energy use.

- **Benchmark a few buildings to inform the content and direction of the Benchmarking Policy.** To facilitate the internal review and approval process, it is important to see what the specific benefits are to benchmarking. By setting up a Portfolio Manager account and benchmarking a few buildings as part of the policy development process, you see how benchmarking can help assess and track a building's energy usage, energy costs, and greenhouse gas emissions over time.

- **The data collection process can take a very long time** so it is important to start it as soon as possible. The process will vary depending on each building type due to the data requirements of Portfolio Manager. As a result, it is important to identify the space type of each building (Office Building, Police Station, Fire Station, Community

Center, etc.) first to see what information needs to be collected. For instance, data needed for an office building will include the square footage of the building, the hours of operation, the number of employees, number of computers and the percent of space heated and cooled, in addition to the last twelve months of energy data. A police station will just need to include the square footage of the building and the last twelve months of energy data. Setting up a data collection template and creating checklists to track what information has been collected can help streamline the data collection process.

- **Set-up the automatic upload of energy data into Portfolio Manager** to ensure continual benchmarking. Use the Automated Benchmarking System offered by SCE to automatically transfer billing data to Portfolio Manager as the bills are incurred.

- **Consider how the benchmarking results will be used and disclosed as well as how frequently the results will be analyzed.** It is important to understand how the benchmarking results will be used and what types of information will be disclosed, both internally and to the public. Some may only want to use the benchmarking data for internal purposes. Others may want to disclose all or some of the results to the public. Considerations should be taken about the data that will disclosed – all or some buildings, and frequency of updates are two of the most important decisions.

- **How often will benchmarking results be analyzed.** It is also important to determine how often the benchmarking results should be analyzed. Some may want to analyze the results on a yearly basis while others may want to analyze the results more frequently. For instance, if a building's energy consumption pattern has changed dramatically, the results can be analyzed to assess what is causing the change. For instance, there could be a change in operations (more people, longer hours, etc.), a change in equipment (new equipment installed, tuned, or problem with a piece of equipment) that changes the energy use and warrants more analysis.

- **Develop benchmarking procedures so that participating municipalities have guidance to implement the Benchmarking Policy.** The customized Benchmarking Procedures document provided the step by step detailed instructions and guidance to help Participating Municipality staff benchmark a building. Since Participating Municipalities agreed to benchmark on an annual basis, the documents can be used to remind staff how to collect the data through Portfolio Manager. The Procedures document can also assist staff on how to benchmark new buildings the Municipality may acquire in the future or be used to help train new staff on benchmarking.

Knowledge Transferred

- With the aid of this measure, local jurisdictions obtain information regarding how much energy is being used at their local facilities.

- This information is useful for building officials because they can coordinate with staff on energy efficient measures.

Next Steps

- Participating Municipalities will be able to identify and target high usage facilities for energy efficiency improvements by comparing their building's energy use intensity and/or ENERGY STAR scores to other similar buildings across the sub-region, state, and country.

Benefit to the State

- By applying the benchmarking policies, participating jurisdictions will be able to see how much energy usage is occurring at their facilities and in turn a solution can be enacted to reach State energy goals.

- Implemented measure will aid with the reduction of greenhouse gas emissions (GHG's) such as AB 32.

Benefit to Local Government

- As part of the development of the Benchmarking Policy and Procedure documents, each participating municipality established an EPA ENERGY STAR Portfolio Manager account.

- By using Portfolio Manager, Participating Municipalities can track and assess a building's energy usage over time since SCE and SoCalGas (if applicable) are providing energy usage automatically on a monthly basis.

- Data was collected for each City owned and operated building.

- Each Participating Municipality benchmarked at least one building using Portfolio Manager with energy data provided by automatically by Southern California Edison and Southern California Gas (if applicable).

- City staff in each Participating Municipality reviewed the Benchmarking Policy and Procedures and determined which departments would be involved in tracking and assessing their building's energy usage on an annual basis and modified common policy elements based on City specific needs.

Successes

- Customized benchmarking policy and procedures documents were developed for the 11 Participating Municipalities of Calimesa, Canyon Lake, Hemet, Lake Elsinore, Menifee, Murrieta, Norco, Perris, San Jacinto, Temecula, and Wildomar.

- 122 buildings in the WRELP sub-region have been benchmarked.

Challenges

- The SCE data collection process (Automated Benchmarking System (ABS)) to customize the Benchmarking Policy and Benchmarking Procedure document for each Participating Municipality took much longer and was more time consuming than expected.

- EPA launched a redesign of Portfolio Manager In July 2013, resulting in additional effort to setup Portfolio Manager.

4.2 Strategic Plan Task 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.

4.2.1 City of Beaumont – Phase 1

Local Government Partnership: Beaumont Partnership

Project Title: Utility Manager Computer Program

Project Purpose: Set up a "Utility Manager" computer program to track municipal usage, budget and manage bills. The information from the Utility Manager will assist in the analysis of energy usage to strategically address municipal energy usage and how to evaluate and prioritize future energy efficiency projects.

Project Scope and Components: The Implementer will develop a set of selection criteria a Utility Manager system must meet. These criteria may include base and extended costs, weather normalization methodology and turn-key implementation services. The Implementer will make its selection of utility manage systems, install and undergo training.

Analyze and interpret the information provided by the Utility Manager Software program to strategically address municipal energy usage and provide an example to other public and private entities within the Implementer's sphere of influence. In addition, once the Staff has been trained on the proper use of this software, the Implementer will offer demonstrations and training to neighboring cities and other local entities that are interested in implementing this software.

Deliverables:

1. Report on Status of Consultant or Subcontractor to Support the Task

2. EEMIS/Utility Manager Assessment and Planning Report

3. Procure Utility Manager/EEMIS System

4. Utility Manager/EEMIS Installation Report

5. Training Program Plan

6. Training Program Report

7. Deliver Monthly reports from Utility Manager/EEMIS system

Date Approved (Advice Letter (NTP)): March 2011 (September 2011)

Date Completed (est.): June 2012   **Date Completed (actual):** April 2013

Estimated Cost: $75,000   **Final Program Cost:** $81,452 ($110,000 Budget)

Local Match Contribution: $0

Project Reimbursed for LG Staff Time: Ⓨ / N

Program Budget Unspent: $28,548

Best Practices
• The real time data generated through Energy Management System will help develop the realistic EE goal and monitor the success.

Lessons Learned
• During the process of transferring the data from the Utility, City learned that the careful pre-screening of City's IT compatibleness could have made this process much easier.

Knowledge Transferred
• Sharing the knowledge of training staff with other neighboring agencies.

Next Steps
• The Implementer hopes to continue to "lead by example" by holding our facilities to a higher standard of energy efficiency. The Implementer is currently researching methods for incorporating renewable energy (solar, biogas, wind, and fuel cells). The Implementer is also looking to engage other public entities in our community, such as our local school district and water district, to create a community-wide "sustainable

public buildings coalition." This group would share best practices and lessons learned with one another, particularly when it comes to building and upgrading public facilities for energy efficiency.

Benefit to the State

- The State will benefit from the installation of the utility manager program by enabling the Local Government to identify energy usage patterns and target energy reduction strategies where impacts can be optimized, thereby reducing energy use and GHG emissions.

- This task helps the State meet AB 32 goal.

Benefit to Local Government

- The system will enable Staff to intelligently analyze utility bill data to reduce energy consumption, avoid costly peak demand usage, to mitigate greenhouse gas emissions and to save limited city resources. EnergyCAP Express will be a fundamental tool in the city's comprehensive energy management plan.

Successes

- The Implementer selected the EnergyCAP Express system to track electricity usage for all of the Implementer's Southern California Edison service accounts. The Implementer foresees the following energy efficiency impacts from using EnergyCAP Express:

    o The ability to accurately track energy use and expense

    o The ability to identify anomalies in energy demand that may point to equipment malfunctions or operational issues

    o To be able to gain the intelligence required to immediately address both short and long-term energy efficiency opportunities

    o To measure the impacts of energy efficiency projects (e.g., energy benchmarking)

- The outcome of this task is to optimize the configuration and use of the utility management system.

Challenges

- Operationalizing data transfer from SCE took longer than expected. Staff compensated for the lack of data by taking trainings on how to use EnergyCAP's many capabilities. Staff worked collaboratively with EnergyCAP and SCE to get the data

transfer situation sorted out.

4.2.2   City of Brea – Phase 1

Local Government Partnership: Community Energy Partnership

Project Title: Utility Manager Software Program

Project Purpose: Develop useful municipal facility energy reporting to improve energy decisions. The system will improve reporting to meet reporting requirements for ABX.2 and the Climate Action Plan.

Project Scope and Components: Implementer does not have a Utility Manager program to provide needed energy reporting for its 15 municipal buildings. The Implementer has several different buildings with different energy management systems (EMS). It is critical to invest in a single reporting program to simplify the Implementer's reporting requirements going forward. With the development of a new Climate Action Plan (CAP) and implementation of a new energy project for municipal buildings, the Implementer has a need for detailed and easy-to-use reporting of energy use for all of its facilities.

> **Deliverables:**

1. Report on Status of Consultant or Subcontractor to Support the Task
2. EEMIS/Utility Manager Assessment and Planning Report
3. Procure Utility Manager/EEMIS System
4. Utility Manager/EEMIS Installation Report

Date Approved (Advice Letter (NTP)): March 2011 (April 2011)

Date Completed (est.): February2012   **Date Completed (actual):** February 2014

Estimated Cost: $67,270   **Final Program Cost:** $241,581 ($241,153 Budget)

Local Match Contribution: $0

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

Program Budget Unspent: $0

Best Practices

- Set up a program to track energy usage

Lessons Learned

- Program only as good as staff members using it

Knowledge Transferred

- Some staff members have been taught how to use the program

Next Steps

- Adjustments must be made to optimize the functionality of the Utility Manager. Some data adjustments will be required to maximize its utility.

Benefit to the State

- The State will benefit from the installation of the utility manager program by enabling the Local Government to identify energy usage patterns and target energy reduction strategies where impacts can be optimized, thereby reducing energy use and GHG emissions.

- Any efficiencies gained on the part of the Implementer mean that less of the State's resources must be used.

Benefit to Local Government

- Implementer's officials are pleased with the system's capabilities to track usage, flag anomalies, and fine-tune operations to save money, extend the life of equipment, and reduce the Implementer's carbon footprint.

- The Utility Manager will enable the Implementer to more effectively plan, budget and manage efficiency investments and ultimately power bills.

Successes

- The Implementer selected LA County's EEMIS system to provide its Utility Manager needs.

- The Implementer's Utility Manager System has been successfully installed. While the process has been slow and some data adjustments will be required to maximize its

> utility, Implementer's officials are pleased with the system's capabilities to track usage, flag anomalies, and fine-tune operations to save money, extend the life of equipment, and reduce the Implementer's carbon footprint.

Challenges
• Data transfer from SCE was delayed due to technical issues, causing issues with consultants supporting the task, as well as delaying the full deployment of the system.

4.2.3   Coachella Valley Association of Governments – Phase 1

Local Government Partnership: Desert Cities Partnership

Participating Municipalities: Blythe, Cathedral City, Desert Hot Springs, Indian Wells, Palm Springs, Rancho Mirage, and the Agua Caliente Band of Cahuilla Indians

Project Title: Enterprise Energy Management Information System/Utility Manager Software

Project Purpose: Establish a Utility Manager Software system for each Participating Municipality that provides tools to track energy use and costs, evaluate usage to identify energy efficiency opportunities on an ongoing basis.

Project Scope and Components: The Implementer will select and deploy Utility Manager for Participating Municipalities. The Utility Manager will provide tools to track energy use, achieve energy cost savings, and set up a system to measure success in reducing energy use and greenhouse gas emissions. Implementer will ensure that the selected Utility Manager will allow users to review and analyze energy usage data, allowing for analysis of program success and ways to maximize all available cost and energy savings opportunities.

Deliverables:

1. EEMIS Assessment and Planning Report
2. Documentation of procurement of Utility
3. Draft EEMIS Installation Report
4. Final EEMIS Installation Report
5. Draft EEMIS Case Study
6. Final EEMIS Case Study

7. Draft EEMIS information dissemination plan

8. Final EEMIS information dissemination plan

9. Monthly reports from EEMIS and of tracked Performance Indicators not included in reports from EEMIS

Date Approved (Advice Letter (NTP)): March 2011

Date Completed (est.): May 2012 **Date Completed (actual):** December 2014

Estimated Cost: $778,256   **Final Program Cost:** $3,924,823 ($4,915,380 Budget)

Local Match Contribution: $0

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

Program Budget Unspent: $990,557

Best Practices
• We worked with our member jurisdictions to review and select the most effective utility manager system. The LA County EEMIS system was chosen. The support and training provided by LA County staff was very helpful in integrating EEMIS into the Green for Life program.

Lessons Learned
• Obtaining the data necessary to set up EEMIS for our member jurisdictions was a challenge, but resulted in greater knowledge of their meters, electricity demands, and utility management opportunities.

Knowledge Transferred
• Through the Desert Cities Energy Partnership, CVAG has disseminated Green for Life program information to partners including the Coachella Valley Economic Partnership, Desert Valleys Builders Association, local water districts, and other local governments not served by SCE. We will continue to share information through our Green for Life website, articles in jurisdiction newsletters and websites, outreach events, presentations to community groups, and media/social media outreach.

Next Steps

- Implementer continues to work with our member jurisdictions and LA County to train new staff in the use of EEMIS and to promote its use. New more user friendly interface and "green button" data transfer from SCE is being explored.

Benefit to the State

- The State will benefit from the installation of the utility manager program by enabling the Local Government to identify energy usage patterns and target energy reduction strategies where impacts can be optimized, thereby reducing energy use and GHG emissions.

- The State will benefit from this task because it helped to integrate the California Long Term Energy Efficiency Strategic Plan (CLTEESP) into the operations of Participating Municipalities.

Benefit to Local Government

- The program was designed to integrate long-term energy efficiency and climate action planning for our local governments with other elements of the Strategic Plan. We chose a strategy to bring together municipal energy efficiency tasks including benchmarking, commissioning/retro-commissioning, a utility management system, and energy action planning with sustainability programs -- green building and beyond Title 24 tasks as well as greenhouse gas inventories and climate action plans. These tasks were unified as a green government initiative with the Green for Life brand.

Successes

- The Implementer selected LA County's EEMIS system as the Utility Manager system for its Participating Municipalities, after reviewing proposals from six vendors. The EEMIS system supports the Green for Life program goals of providing each Jurisdiction with an energy management tool to monitor and analyze facility electric bill data that will support the development of cost effective energy management programs and policies for their facilities.

- Trainings by LA County comprised three phases where: Phase 1 was introductory and provided attendees with basic information on the system; Phase 2 was a hands-on training for the primary users of EEMIS within the city; and Phase 3 was targeted at those that would benefit from EEMIS and provided direction on how to use and interpret the data and incorporate the system into normal operations.

Challenges

- The process of getting EEMIS data ready for transfer from SCE to LA County (the

> EEMIS administrator) was involved and took more time than expected.

4.2.4 City of El Segundo – Phase 1

Local Government Partnership: South Bay Partnership

Project Title: Utility Manager Computer Program

Project Purpose: Install Utility Manager that enables Implementer to track and manage energy usage, as well as develop energy usage profiles for each facility.

Project Scope and Components: Implementer will procure a Utility Manager Software program   that will have the capability to evaluate Implementer's energy usage by building site. Implementer will set up the system so that it is fully functional. Implementer will also develop a Utility Manager policy statement that will include how the system will be used, frequency of analyses and updates, and other operational considerations.

Deliverables:

1. Utility manager installation planning report
2. Report on Utility Manager installation
3. Report of Utility Manager training   and maintenance activities
4. Utility manager and benchmarking policy case study.
5. Monthly status report

Date Approved (Advice Letter (NTP)): March 2011 (April 2011)

Date Completed (est.): September 2012   **Date Completed (actual):** October 2014

Estimated Cost: $36,000   **Final Program Cost:** $454,153 (486,500 Budget)

Local Match Contribution: $0

Project Reimbursed for LG Staff Time: Y / N

Program Budget Unspent: $32,347

Best Practices

- Implementer's Staff worked closely with their internal departmental staff to develop a list of key functions and criteria needed for the UMS to both meet the city's expectations and meet the overall goals of the program. The UMS would bring to the city improved availability of consistent energy consumption and cost data to remove one of barriers to effective decision-making in energy efficiency project prioritization.

    o The project began with a kick-off meeting including all city staff that would be regular and frequent users of the software program. The meeting provided an overview of the intent and common practices of the UMS. Attending staff members represented multiple departments including: public works, parks and recreation, buildings, and transportation.

    o Implementer identified potential UMS providers for evaluation. Each provider was given an opportunity to present their software and provide staff members a live demonstration. The following information was gathered to create a software comparison matrix: software capabilities, cost, implementation schedule, number of users, additional cost beyond the funding period and training. Based on this information implementer selected a UMS that met both program requirements and city expectations.

Lessons Learned

- The Implementer learned an effective energy management strategy requires proper energy usage tracking. Data such as concrete numbers and cost savings can help to drive decision and policy making. The Implementer will use the utility management software to track the energy usage of all municipal facilities in the future and help inform future energy decisions.

Knowledge Transferred

- Implementer will also develop a benchmarking and Utility Manager case study.

Next Steps

- Implementer will continue to utilize utility manager software system to track and monitor energy usage in municipal operations and use this information to guide prioritize of energy efficiency improvements.

Benefit to the State

- Local governments integrating energy efficiency in their municipal operations align with the state's "loading order" of first addressing energy efficiency as California's top priority resources.

Benefit to Local Government
• Implementer has greater access to consistent historical and ongoing data better enabling city staff to set and track energy management goals, benchmark building energy performance, and choose effective investments for lower-performing buildings.

Successes
• The Implementer is to utilizing LA County's EEMIS to measure and track energy usage by building site. • The Implementer assessed its facilities and determined a need for sub-metering at our municipal building campus which includes City Hall, Policy Headquarters, and the Fire Station. All three buildings share a master meter which prohibits the Implementer's ability to accurately track energy usage at the building level. The information will be used to gain a more granular level of energy consumption and costs to better inform future cost effective energy efficiency and cost reduction planning. The Implementer used an electrical contractor to do the sub-metering work for the municipal campus.

Challenges
• Had difficulty locating a contractor to perform work within budget and fulfill contracting requirements from the Implementer. This can be attributed to inexperience and knowledge of staff in recognizing obstacles in utilizing collective bidding process. Had to rebid the work, causing a significant delay in implementation.

4.2.5   County of Inyo – Phase 1

Local Government Partnership: Eastern Sierra Partnership

Project Title: Set Up 'Utility Manager' Computer Program to Track Municipal Usage

Project Purpose: Set up 'Utility Manager' computer program to track municipal energy use and GHG emissions. This information will be used to develop programs to encourage energy efficiency, and identify opportunities and measures to reduce energy use.

Project Scope and Components: Implementer will select and deploy the Utility Manager to track energy use, achieve energy cost savings, and to set up a tracking program to measure success in reducing energy use. The Implementer will ensure that the results from the Utility Manager allows users to review and analyze energy usage data allowing for analysis of program success and ways to maximize all available cost and energy savings opportunities.

Deliverables:

1. Report on Status of Consultant or Subcontractor to Support the Task
2. Utility Manager Assessment and Planning Report
3. Procure Utility Manager System
4. Utility Manager Installation Report
5. Training Program Plan
6. Training Program Report
7. Deliver Status Monthly status reports

Date Approved (Advice Letter (NTP)): March 2011 (March 2011)

Date Completed (est.): January 2013   **Date Completed (actual):** September 2012

Estimated Cost: $55,316   **Final Program Cost:** $174,795 ($173,028 Budget)

Local Match Contribution: $0

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

Program Budget Unspent: $0

Best Practices
• Implementer elected to use EPA's Energy Star Portfolio Manager as its Utility Manager system. The primary reasons were cost and ease of use.

Lessons Learned
• Assess the costs of what you get from particular programs with your jurisdiction's specific needs.
• Allow a lot of time to find and collect energy use data. This process was, by far, the most time consuming, and frustrating of everything we did for this project. Implementer had to send Staff out in the field to collect meter numbers for the SCE automated system. We also waited close to three months to get our utility use and billing data from LADWP.
• Do not forget that you will also need to collect gas use data. If your facilities also use natural or LP gas this can mean going to a variety of suppliers for these data. This is necessary for a complete benchmarking analysis. This caught the project team by surprise. Collecting LP gas data late in the data gathering stage set caused a delay in

completing the benchmarking analysis.

- Be flexible, the data often comes in formats that are not the easiest to understand and do not be afraid to contact your utility companies repeatedly for clarification. Eventually, you are likely to find a helpful staff person to talk you through it.

Knowledge Transferred

- This document serves as the primary mechanism of conveying best practices and lessons learned from this task. However, the implementer is available to discuss this further with any interested parties.

Next Steps

- The Implementer will develop a revolving energy efficiency fund to provide funding for energy efficiency projects through the 2013-2014 LGP Strategic Plan Pilot Program.

Benefit to the State

- The State will benefit from the installation of the utility manager program by enabling the Local Government to identify energy usage patterns and target energy reduction strategies where impacts can be optimized, thereby reducing energy use and GHG emissions.

Benefit to Local Government

- UMS quickly identifies inefficient facilities and potential energy projects.
  - Regular annual analysis of usage focused on identifying high usage facilities, which hadn't been done before.
- Facilities with low-efficiency have been identified.
- Policies were passed by the Board of Supervisors but have not yet been implemented.

Successes

- The Implementer elected to use EPA's Energy Star Portfolio Manager as its Utility Manager system. The primary reasons were cost and ease of use.

Challenges

- A challenge with the Utility Manager is understanding what the data are required for

> setup, and what the outputs/reports of the system are and how to effectively use this information.

4.2.6   County of Los Angeles – Phase 1

Local Government Partnership: Los Angeles County Partnership

Participating Municipalities: Santa Monica, Costa Mesa, Huntington Beach, Fountain Valley, Westminster, Newport Beach, Alhambra, Arcadia, Baldwin Park, Bradbury, Claremont, Covina, Diamond Bar, El Monte, Glendora, Irwindale, La Canada-Flintridge, La Puente, La Verne, Monterey Park, Pomona, Rosemead, San Dimas, San Gabriel, San Marino, South El Monte, South Pasadena, Temple City, Walnut and West Covina

Project Title: Utility Manager Computer Program

Project Purpose: Through this task the Implementer will facilitate the establishment of Utility Manager System for Participating Municipalities, enabling them to lead by example by managing the energy use at their own facilities and energy usage practices by better assessing and managing their energy usage using a standardized approach used by other Participating Municipalities.

Project Scope and Components: Facilitate the establishment of a specific Utility Manager system known as EEMIS for other Local Governments. Implementer has been using EEMIS for many years and will leverage this experience with EEMIS in completing this task. Implementer will modify and host EEMIS, help other local governments to obtain access to EEMIS, facilitate the installation of EEMIS, training of Local Governments, and provide post installation consulting support to enhance and ensure the proper use of EEMIS.

> **Deliverables:**

1. Report on status of Implementer or Subcontractor to support the Task
2. EEMIS planning report
3. Report on Implementer's EEMIS modifications and ongoing EEMIS hosting
4. Report on Implementer's activities to enable Participating Municipalities to procure access to EEMIS
5. Report on facilitation of Participating Municipalities' EEMIS installations by Implementer
6. Report on Post-EEMIS installation consulting support

7. Documentation of EEMIS use by Participating Municipalities

8. Monthly status report

Date Approved (Advice Letter (NTP)): September 2011 (November 2011)

Date Completed (est.): Apr 2012   **Date Completed (actual):** Apr 2015

Estimated Cost: $800,000   **Final Program Cost:** $900,541 ($1,000,000 Budget)

Local Match Contribution: $0

Project Reimbursed for LG Staff Time: Ⓨ / N

Program Budget Unspent: $99,459

Best Practices
- EEMIS enables Participating Municipalities to review energy usage monthly and identifies areas of high usage/cost.   - To identify and target high usage facilities for energy efficiency improvements   - Participating Municipalities can regularly analyze energy usage, focusing on identifying facilities with high usage which will help to identify energy efficiency projects.   - EEMIS enables municipalities to verify the energy savings of implemented projects   - Implementer facilitated a tiered training approach for the new city customers with support by McKinstry. Participating Municipalities were provided training on all aspects of the EEMIS database operations, how to use EEMIS, run reports and how to analyze energy consumption data through both hands-on trainings and regional workshops.   - Tier 1: Training in each region was tailored for users that operate facilities.   - Tier 2: Training was for users from a financial management and processing view point.

Lessons Learned
When the task launched, the immediate feedback from the Participating Municipalities was very positive, interest and engagement was very promising, but due to data transfer issues and issues related to the approval of authorization forms, that resulted in long delays in getting Billing Data populated into EEMIS, the momentum slowed, Participating Municipalities had staff turnover, and interest declined. Thus, the lesson

learned is:

- o Do not engage Participating Municipalities until billing data was being transferred into the program:

- The timing of the initial engagement with the Participating Municipalities was unfortunate; in 2011 many cities were faced with a recent reduction of work force, so they were short staff and working hard to cover the entire work load. So expecting dedication of city resources at the onset was problematic.

- Ensuring the accuracy and completeness of the Utilities customers' accounts and to map the utility account numbers to municipal facilities proved to be a major challenge. The COGs and Implementer underestimated the amount of work that was required in to match SCE account numbers to municipal facilities. This process was extremely labor-intensive, and most Participating Municipalities did not have the staff time or initiative to match the accounts themselves.

- More hands-on support for the cities: The cities see the benefit of having EEMIS, but they need direct consulting help them utilize the information from EEMIS.

- "Cities must have more skin in the game": The San Gabriel Valley Association of Governments ("SGVCOG"), one of the organizations support this task through their own Utility Manager task, entered into an memorandum of understanding ("MOU") with the Implementer to provide the EEMIS program to all Participating Municipalities, so that Participating Municipalities do not have to undertake a procurement process or enter into a contractual arrangement with a software provider. While the SGVCOG entered into an MOU with 25 of the Participating Municipalities, this MOU was primarily issued to the Participating Municipalities so they would be able to be reimbursed for staff time spent on the task. There were no other requirements for the Participating Municipalities for participation in the task. As a result, if a Participating Municipality opted to not "participate" in the program, either by not signing CISR forms or not attending meetings, there were no consequences for the Participating Municipality. The "carrot" approach that the SGVCOG opted to use – by providing not only free use of the EEMIS program but also providing additional reimbursement for staff time – did not incentivize participation among all Local Governments that originally signed up for EEMIS.

Knowledge Transferred

- This document serves as the primary mechanism of conveying best practices and lessons learned from this task. However, the implementer is available to discuss this further with any interested parties.

Next Steps

- There are no Strategic Plan activities currently planned for LA County. However, Los Angeles County will continue to pursue Strategic Plan activities through the Los

> Angeles County Partnership with SoCalGas and Southern California Edison.

Benefit to the State

- The State will benefit from the installation of the utility manager program by enabling the Local Government to identify energy usage patterns and target energy reduction strategies where impacts can be optimized, thereby reducing energy use and GHG emissions.

Benefit to Local Government

- EEMIS enables Participating Municipalities to review energy usage monthly and identifies areas of high usage/cost.
    - To identify and target high usage facilities for energy efficiency improvements
    - Participating Municipalities can regularly analyze energy usage, focusing on identifying facilities with high usage which will help to identify energy efficiency projects.
    - EEMIS enables municipalities to verify the energy savings of implemented projects

- Participating Municipalities can analyze energy usages annually to prepare annual energy efficiency improvement planning process.

- Participating Municipalities have a better understanding of their inventory and its fiscal impact

Successes

- Implementer engaged with its partner in the EEMIS product, McKinstry Essention INC. to enhance the capabilities of the EEMIS to better accommodate other local governments. Implementer promoted EEMIS by working closely with:
    - SCE
    - City of Huntington Beach (representing the Orange County Cities Energy Leader Partnership)
    - San Gabriel Valley COG
    - South Bay Cities COG
    - City of Santa Monica
    - Coachella Valley Association of Governments
    - City of Simi Valley

- o City of Oxnard

- o City of Santa Barbara

- Implementer engaged with McKinstry to modify EEMIS to incorporate anonymous Benchmarking capabilities.

- Implementer facilitated a tiered training approach for the new city customers with support by McKinstry. Participating Municipalities were provided training on all aspects of the EEMIS database operations, how to use EEMIS, run reports and how to analyze energy consumption data through both hands-on trainings and regional workshops.

    - o Tier 1: Training in each region was tailored for users that operate facilities.

    - o Tier 2: Training was for users from a financial management and processing view point.

- Training Tools. Four of the six trainings had the webinars recorded for future training use and we also developed a series of e-tutorials, which are short how-to videos to guide users through such things as how to create a reports and how to interpret the results. Both of the electronic training aids are available from within the EEMIS application by following a link.

- Optional Metering Approaches.

    - o Time of Use (TOU) Meters to capture 15 minute data and bring it into EEMIS.

    - o Sub-metering could be installed on a case-by-case basis if approved by SCE for 'Campus' environments.

    These two metering alternatives ended up being only somewhat successful with five (5) cities installing the required hardware and data network connections.

- EEMIS is performing better than ever. No known negative feedback on performance or feature function was reported, 56 Cities and four (4) years of data is active in EEMIS this metric was successful.

- EEMIS Promotion, adoption and Training. With support from the COGs, 56 Cities now have a Utility Management tool that they can utilize.

- Attendance at the training events was as expected or better, and the materials and instruction was well received, this metric was successful

Challenges

- Data Transfer issues took approximately 12 months to resolve:

    - o CISR Form (Form 14-796, Authorization to: Receive Customer Information Or Act On A Customer's Behalf)

        - ▪ Incomplete list of Service Accounts

            - A requirement to attach a <u>complete</u> list of Service Accounts to be included was the instruction given. This was usually met

> through a corporate view provided by SCE.
>
> - SCE provided corporate views when requested by participants to their respective SCE Account Reps. These Corporate views were not always accurate, resulting in the CISR process to have to be repeated with a corrected list of Service Accounts.
>
>   - The process used for approval of CISR forms was inconsistently managed by SCE.
>
> o These issues (CISR and list of Service Accounts) should be resolved with the further development of the "Green Button" processes by the IOUs.
>
> - Obstacles to Collecting Interval Data or Sub-meter Data.
>
>   o Only five (5) (Cities of Gardena, Simi Valley, Covina, West Covina and El Segundo) decided to install the needed, additional hardware, indicating a barrier to the collection of these data.
>
>   o Interval Data Collection Obstacles: One obstacle was the utility requirement for service to be 200 kW or greater for a pulse initiator to be installed on a meter, and the SCE requirement that if a Smart Meter was deployed, it was not eligible for pulse initiator installation, as the Smart Meter would have to be removed and an old meter re-installed.
>
>   - SCE's tariffs and rules require that a TOU meter be installed for a pulse initiator to be installed on an SCE revenue meter.
>
>   - At the time of implementation SCE was changing out most meters with Smart Meters. Internal policies prohibited removing a Smart Meter and replacing it with a regular meter.
>
>   - These issues should be resolved with the further development of the "Green Button" processes by the IOUs.
>
>   o Local Governments found it complicated to install sub-meters on campus facilities. The contracting process to have the work done was difficult. The Local Government had to:
>
>   - Hire contractors or an installer to install the specified data gathering equipment and
>
>   - Hire another contractor to have their firewalls & network configured and to connect the data equipment to the internet.

4.2.7   Orange County Cities – Phase 1

Local Government Partnership: Orange County Cities Partnership

Participating Municipalities: Costa Mesa, Huntington Beach, Fountain Valley, Westminster, Newport Beach

Project Title: Utility Manager Computer Program

Project Purpose: Through the Program, the Implementer will enable Participating Municipalities to use of a Utility Manager Software system. The system will allow the municipalities to track energy use and benchmark facilities operated by the Participating Municipalities on a consistent basis, to identify opportunities that improve the energy efficiency of these facilities, and to inform their cities' budgeting (capital and operating) process and develop projects/improvements that reduce energy and administrative waste per the submitted proposals.

Project Scope and Components: Implementer will establish a network using an enterprise Utility Manager system for monitoring the energy usage of facilities operated by Participating Municipalities. The Implementer will facilitate the procurement of the right to its use, and all required software purchases and activities to make Utility Manager System functional for tracking municipal energy usage. A framework for energy use analysis at city facilities and corrective actions to be taken will be established.

The Implementer's team will establish EEMIS with utility bill information, geographic location information, and load information, such as hours and equipment for all utility accounts, to enable streamlined energy project development, ongoing measurement and verification (M&V), and energy efficiency (EE) measures identification. The team will also track and benchmark municipal facilities.

> **Deliverables:**

1. Kickoff meeting with Los Angeles County and an understanding of the timeline
2. EEMIS/Utility Manager Assessment and Planning Report completed (including evaluation of Los Angeles County EEMIS system) for review and comment by SCE; if Los Angeles County EEMIS system is not adopted, provide rationale.
3. If Los Angeles County EEMIS is not adopted, develop, issue RFP; procure Utility Manager/EEMIS System
4. Create Program Management Plan (PMP) template
5. Begin implementation of PMP for each Participating Municipality
6. Signed agreement(s) between the Implementer and Utility Manager provider and the Utility Manager provider
7. Recruit and enroll participants in Utility Manager/EEMIS from Participating Municipalities; customize PMP for each Participating Municipality
8. Signed agreement(s) between the Participating Municipalities and the Utility Manager provider

9. Test network connectivity and functionality for facilities of each Participating Municipality

10. Prepare Utility Manager/EEMIS Installation Report

11. Hire interns to provide Utility Manager/EEMIS software support

12. Establish tool lending library

13. Assess the value and benefits of the Program and report list of identified needs as they occur.

14. Deliver Monthly reports from Utility Manager/EEMIS system

Date Approved (Advice Letter (NTP)): March 2011 (September 2011)

Date Completed (est.): March 2012   **Date Completed (actual):** May 2015

Estimated Cost: $545,000   **Final Program Cost:** $222,633 ($545,000 Budget)

Local Match Contribution: $0

Project Reimbursed for LG Staff Time: Y / N

Program Budget Unspent: $322,367

Best Practices
• For meter location data, applied cost-effective geotagging through smartphone versus using expensive and bulky GIS equipment for vague service addresses lacking street names.
• Developed Energy Use Intensity (EUI) via EEMIS to target facilities in Huntington Beach and Newport Beach for SCE's Direct Install Program.
o City of Huntington Beach SCE Direct Install – approximately 100,000 kWh savings
o City of Newport Beach SCE Direct Install – approximately 148,200 kWh savings
• The resources listed below allowed the Participating Municipalities to achieve their goal of 100% SCE accounts enrolled in EEMIS:
o Full time Energy Manager through City of Huntington Beach;
o One Energy Champion from each Participating Municipality;
o Energy interns to enroll accounts into EEMIS, provide data entry and basic energy management such as load balance calculations, identify meter locations using geotagging through GPS-enabled smartphone to determine latitude and longitude3
o Los Angeles County provided database structure, setup billing data file

conversion and transfer, and training.

Lessons Learned

- Top management support needed

- Designated city and finance staff, for example "an Energy Champion," to help navigate through the city and access to accounting records.

- As a local government led project, Implementer understood the constraints of government and designed the EEMIS implementation to minimize city staff impact by using energy interns under guidance and direction of Implementer (from Huntington Beach)

- Prepare and submit CISR forms ("*Authorization To: Receive Customer Information or Act On a Customer's Behalf*") as soon as possible, ensure all signatures are on the form before submitting to city manager or other city personnel with authorization to sign

- Provide access to at least one year of paper utility bills to review General Fund and Enterprise Fund with accounting coding

- Organize service accounts according to facility names and departments that make sense to city, and categorize under General Fund or Enterprise Fund (or other naming/budgeting convention used by city)

- Personnel who can research, understand energy management, form and maintain relationships, and communicate clearly is vital to a successful EEMIS project

Knowledge Transferred

- Anonymous Benchmarking Feature of EEMIS: This feature allows information sharing across local governments. With anonymous benchmarking, buildings with similar square feet and use type can be anonymously benchmarked with the participating cities' facility energy use data. For example, a city that is enrolled in EEMIS can compare their Civic Center with another Civic Center within Los Angeles County/McKinstry's EEMIS database. Now cities can benchmark their facilities with other cities anonymously.

Next Steps

- The City of Huntington Beach is developing a customized Climate Action Plan with energy efficiency language as part of 2013-2015 Strategic Plan funding.

Benefit to the State

- The State will benefit from the installation of the utility manager program by enabling the Local Government to identify energy usage patterns and target energy reduction strategies where impacts can be optimized, thereby reducing energy use and GHG emissions.

Benefit to Local Government

- The Utility Manager provides timely and credible usage and budget information. It will also provide EE project M&V reporting to financial decision-makers at the Participating Municipalities when considering potential EE measures.

- The utility bill manager provides accessible and timely information to speed energy efficiency project development, incentive applications, retro-commissioning capabilities, and improve persistence through affordable ongoing M&V capabilities. This will allow for identification of energy efficiency opportunities for municipal facilities/operations. TOU-8 pulses will facilitate assessing demand response (DR) potential and M&V.

- This task established EEMIS with utility bill information, geographic location information, and load information, such as hours and equipment for all utility accounts, to enable streamlined energy project development and ongoing measurement and verification (M&V).

Successes

- This task created a sustainable utility bill manager system for the Participating Municipalities by providing access to Los Angeles County/McKinstry's (EEMIS is now administered by Energy Hippo) Enterprise Energy Management Information System (EEMIS) to inform their budgeting (capital and operating) process and to develop projects/improvements that reduce energy and administrative waste.

- Enrolled approximately 1,600 SCE service accounts into EEMIS.

- Identified high Energy Use Intensity (EUI) buildings via EEMIS to target small government facilities for SCE Direct Install Program.

Challenges

- Delay in automated data transfer from SCE to Implementer due to issues from the utility side. These issues will be addressed with the Green Button systems that have been developed.

- Unable to identify energy loads behind meter, especially for unattached meters and meters located in parks, which makes energy measures more difficult for city staff.

  o Obstacles overcome for by coordination from Energy Champion at each Participating Municipality.

> - Properly identifying accounts to funding source: Need access to paper utility bills. Only two Participating Municipalities provided paper bills.

4.2.8 City of Oxnard – Phase 2

Local Government Partnership: Ventura Partnership

Project Title: Utility Manager System

Project Purpose: Purchase and install a Utility Manager system that will enable the Implementer to:

- Establish energy consumption baselines
- Monitor energy use to evaluate real time municipal building performance
- Benchmark municipal buildings

Project Scope and Components: Implementer will purchase and deploy a Utility Manager System (UMS) for all Implementer-operated facilities. Implementer will determine whether it will deploy an independent UMS or a regional UMS, so long as the task goals and objectives are achieved.

The Implementer will assess Utility Manager System solutions used by other peer municipalities, and the process these municipalities used to select and install such software and prepare the Assessment and Planning Report. The information gathered in the report will provide a basis for selected a Utility Manager system, as well as the next steps for deployment. Implementer will then select the Utility Manager, go through the installation and training processes, and fully deploy the system.

Deliverables:

1. Draft Utility Manager System Assessment and Planning Report
2. Final Utility Manager System Assessment and Planning Report
3. Utility Manager System Agreement & documentation of procurement of Utility Manager System (invoice for purchase of Utility Manager System or if the County of Los Angeles' enterprise energy management information system ("EEMIS") is selected, MOU between Implementer and the County of Los Angeles to implement EEMIS)
4. Draft Utility Manager System Installation Report

5. Final Utility Manager System Installation Report

6. Draft Utility Manager System Case Study

7. Final Utility Manager System Case Study

8. Draft Utility Manager System information dissemination plan

9. Final Utility Manager System information dissemination plan

10. Monthly reports from Utility Manager System

11. Monthly reports of tracked Performance Indicators not included in reports from Utility Manager System

Date Approved (Advice Letter (NTP): December 2011 (April 2012)

Date Completed (est.): May 2013   **Date Completed (actual):** November 2014

Estimated Cost: $205,000   **Final Program Cost:** $256,582 ($277,000 Budget)

Local Match Contribution: $0

Project Reimbursed for LG Staff Time: Y / N

Program Budget Unspent: $20,418

Best Practices
• The Implementer has experienced the following energy efficiency impacts from using McKinstry's (now Energy Hippo) EEM Suite and tracking electricity usage for the Implementer's top 50 SCE accounts.
o The ability to accurately track Municipal-wide energy usage and expense.
o Establish weather normalized electric consumption baselines on buildings.
o The ability to identify anomalies in energy demand that may point to equipment malfunctions or operational issues.
o The ability to immediately address both short and long-term energy efficiency opportunities.
o Measure the impacts of energy efficiency projects (e.g., energy benchmarking).
• The EEM Suite has a Greenhouse Gas (GHG) module that converts all measured energy use into greenhouse gas emissions using eGRID conversion factors.

Lessons Learned
• **Data management Recommendation for Data Requestors or Managers.** After data

is picked up by Requestors and successfully decrypted, data should be organized and stored in folder for archiving. Shadow copy should be turned on so all raw data files picked up are backed-up on a separate directory. Because SCE data is only stored for only 30-days and historic data must be specially requested plans should be in place to manage and store the data after it is received and processed.

- **Data transfer issues to be aware of:**
    - Mapping of data into Utility Manager
        - Record layout and headers
        - More consistent schema should be used in future "Green Button" system
    - Duplicate or missing records
    - Firewall issues

Knowledge Transferred

- The Implementer has shared its best practices and lessons learned from the process in evaluating different utility management systems along with the comparison of Portfolio Manager and Energy Suite with other municipalities

Next Steps

- Consider the installation of sub-meters for qualified facilities.

Benefit to the State

- Improved monitoring of energy usage has allowed the Implementer to identify additional opportunities for energy efficiency.

Benefit to Local Government

- Maintenance Department reviews energy usage monthly
    - Identifies areas of high usage/cost on approximately 19 building.
    - This staff member is becoming attuned to the results of properties and coupled with technical knowledge of HVAC and other high-energy use equipment can adjust and make recommendation accordingly.
- Maintenance Department analyzes energy usages annually to prepare annual energy efficiency improvement planning process.
    - Identify and target high usage facilities for EE improvements.

- Evaluate energy use and weather correlation.

- Identify saving from historical billing compared to use after installation of energy efficiency measures.

Successes

- Implementer procured Utility Manager System (UMS) software that allows the Implementer to effectively review, track and manage energy related data. After a thorough assessment of available utility management software providers, Staff and stakeholders selected McKinstry Enterprise Energy Management Suite (EEM Suite) as the qualifying vendor software based on project requirements including web-based technology, real-time data, and the capability to compare building performance.

- Trained staff on using the Utility Manager.

Challenges

- Some of Implementer's facilities cannot be truly analyzed because they are part of a "campus-type" facility, where multiple buildings or facilities are served by one meter.

  o This can be addressed through sub-metering, but may be limited by funding from the Strategic Plan due to the types of facility configurations that can be funded under current menu items.

- Gaining access to utility billing data was problematic due to authorization (CISR forms), identification of the meter/facility, and technical issues regarding data transfer.

  o The issues should be resolved with the further development of the "Green Button" processes.

- Data quality issues, e.g., gaps in billing data obtained from the utility.

  o It wasn't until the data is imported into EEM that the gaps were noticed. The issue turned out to be how the data was initially requested (customer account vs. service account).

4.2.9   City of Oxnard – Phase 2

Local Government Partnership: Ventura County Partnership

Project Title: Enroll Implementer-Operated Facilities in SCE's EnergyManager Suite and ENERGY STAR Portfolio Manager

Project Purpose: Implementer will compare effectiveness of Utility Manager System with SCE Energy Manager Suite and ENERGY STAR Portfolio Manager.

Project Scope and Components: Implementer will enroll appropriate Implementer-operated facilities in SCE's Energy Manager Suite and ENERGY STAR Portfolio Manager to establish baseline data and ongoing energy monitoring for its facilities to aid in setting and achieving energy and GHG reduction goals. Energy Manager Suite provides historical comparisons of energy use and costs based on utility bills and Portfolio Manager allows geographic comparisons.

A comparative analysis of the effectiveness of Energy Manager Suite, Portfolio Manager and Implementer's Utility Manager System will be prepared in SP Task 3.1.2.

Deliverables:

1. Draft Utility Manager System Assessment and Planning Report
2. Final Utility Manager System Assessment and Planning Report
3. Utility Manager System Agreement & documentation of procurement of Utility Manager System (invoice for purchase of Utility Manager System or if the County of Los Angeles' enterprise energy management information system ("EEMIS") is selected, MOU between Implementer and the County of Los Angeles to implement EEMIS)
4. Draft Utility Manager System Installation Report
5. Final Utility Manager System Installation Report
6. Draft Utility Manager System Case Study
7. Final Utility Manager System Case Study
8. Draft Utility Manager System information dissemination plan
9. Final Utility Manager System information dissemination plan
10. Monthly reports from Utility Manager System
11. Monthly reports of tracked Performance Indicators not included in reports from Utility Manager System

Date Approved (Advice Letter (NTP)): December 2011 (April 2012)

Date Completed (est.): November 2012   **Date Completed (actual):** June 2015

Estimated Cost: $72,000   **Final Program Cost:** $256,582 ($277,000 Budget)

Local Match Contribution: $0

Project Reimbursed for LG Staff Time: Ⓨ / N

Program Budget Unspent: $20,418

Best Practices
• Prior to participation in the program and procuring the UMS, the Implementer had no efficient and accurate way to pull bill data and compare energy usage by department or building and no way to access this information in an online format for all users. Now, staff in each department and each facility has access to needed resource usage data and can use that data to monitor efficiency in a variety of ways.   • By understanding departmental energy usage it can assist budgeting and cost distribution, as well as identify savings opportunities.

Lessons Learned
• Utilizing the UMS tools to manage facility resources has helped increase awareness of Investor Owned Utility (IOU) programs. Through this and other supporting IOU programs, staff has become informed of what resources are available.   • The City has also improved its concept and processes for planning and funding resource and energy efficiency programs.   • Upon review of the 2015 budget, it has been determined that the Implementer is not in a financial position to add the Sustainability Manager position and will utilize existing staff to fulfill the directives of the EAP and continue to manage the UMS system.

Knowledge Transferred
• The Implementer was able to leverage Portfolio Manager and SCE Energy Suite to ensure the utility management system developed was providing ample and appropriate metrics for the city to analyze energy usage and make decision.   • Portfolio Manager was also helpful in identifying the top users for the Implementer and in ranking their different facilities. The Implementer was therefore able to target its top 50 users which have the largest potential savings.

Next Steps
• None.

Benefit to the State
• The Implementer is able to monitor their usage on a regular basis and better identify the opportunities for both energy efficiency and Demand Response.

Benefit to Local Government
• Obtained Energy Ratings on eligible buildings.

Successes
• Enrolled in SCE's Energy Manager Suite and ENERGY STAR Portfolio Manager to establish baseline data and ongoing energy monitoring.
• The McKinstry EEM Suite was setup to transmit available energy data and use details to Energy Star Portfolio Manager. This allowed qualified buildings to be Energy Star rated.
• SCE's EnergyManager is a web-based tool that provides information such as minimum, maximum, and average energy usage and peak load by 15-minute intervals. Built-in charts and reports supply you with the tools to manage your energy consumption more effectively and cost efficiently. The Implementer enrolled eligible accounts in EnergyManager and used these data for historical comparisons of facility energy use and costs.

Challenges
• Portfolio Manager cannot accurately rate some facilities due to multiple facilities served by a single meter.

4.2.10   City of San Bernardino – Phase 2

Local Government Partnership: Community Energy Partnership

Project Title: Identify, Purchase, and Install Utility Manager Software to Track Energy Consumption of Municipal Buildings

Project Purpose: Procure and establish a Utility Manager system that enables Implementer to analyze, assess, and monitor the Implementer's facility energy usage data and billing data.

Project Scope and Components: The Implementer will facilitate the procurement of the right to use Utility Manager Software adequate to meet the Implementer's needs. Implementer will procure all required software purchases and activities to make the Utility Manager functional for tracking municipal energy usage. The Utility Manager will enable Implementer to access facility energy consumption, archive billing data, and report and analyze energy consumption data via the Internet.

Deliverables:

1. Report on status of Implementer or Subcontractor to support the task
2. Utility manager software planning report
3. Procurement of Utility Manager software
4. Report on Utility Manager software installation
5. Report of Utility Manager training and maintenance activities
6. Report on actions taken resulting from the benchmarking analysis.
7. Monthly status report

Date Approved (Advice Letter (NTP)): December 2011

Date Completed (est.): November 2012 **Date Completed (actual):** September 2013

Estimated Cost: $114,030 **Final Program Cost:** $258,468 ($512,620 Budget)

Local Match Contribution: $0

Project Reimbursed for LG Staff Time: Y / N

Program Budget Unspent: $254,152

Best Practices
• The Implementer worked with EnergyCAP to develop a file reformatter. The reformatter allows the Implementer to structure the SCE data file received via MFT in an acceptable format to import into EnergyCAP's system. The Implementer has over 100 accounts, so the reformatter will allow for a more efficient import of utility data versus manual entry.

Lessons Learned
• The transfer of utility data proved to be a timely process. Plan accordingly.

Knowledge Transferred
• This document serves as the primary mechanism of conveying best practices and lessons learned from this task. However, the implementer is available to discuss this further with any interested parties.

Next Steps
• There are no Strategic Plan activities currently planned for the City of San Bernardino. However, the City of San Bernardino will continue to pursue Strategic Plan activities through the Community Energy Leader Partnership.

Benefit to the State
• The State will benefit from the installation of the utility manager program by enabling the Local Government to identify energy usage patterns and target energy reduction strategies where impacts can be optimized, thereby reducing energy use and GHG emissions.

Benefit to Local Government
• Through the introduction of a utility management system, the Implementer will have a dynamic tool to proactively address energy consumption inefficiencies, lower utility bills and serve as a fundamental strategy in the city's comprehensive energy management plan. The Utility Manager will provide metrics for Staff to use for new policy development and for reports to City Council.

Successes
• The Implementer selected EnergyCAP as its Utility Manager vendor after a thorough assessment of the available utility management software providers.
• The Implementer installed a sub-meter for the Convention Center to allow tracking of energy usage independent of the City Hall building.

Challenges
• The transfer of utility data proved to be a timely process.

4.2.11   San Gabriel Valley Council of Governments – Phase 1

Local Government Partnership: San Gabriel Valley Partnership

Participating Municipalities: Alhambra, Arcadia, Baldwin Park, Bradbury, Claremont, Covina, Diamond Bar, El Monte, Glendora, Irwindale, La Canada-Flintridge, La Puente, La Verne,

Monterey Park, Pomona, Rosemead, San Dimas, San Gabriel, San Marino, South El Monte, South Pasadena, Temple City, Walnut and West Covina

Project Title: Install a Utility Manager System for Participating Municipalities

Project Purpose: To collaborate with the County of Los Angeles ("the County") to implement the County's Enterprise Energy Management Information System (EEMIS) Utility Manager to track municipal energy usage, enabling Participating Municipalities to access facility energy consumption, archive billing data, and report and analyze energy consumption data via the Internet.

Project Scope and Components: The Implementer will facilitate the procurement of the right to use the County of Los Angeles' EEMIS, and all required software purchases and activities to make EEMIS functional for tracking municipal energy usage. EEMIS will enable Participating Municipalities to access facility energy consumption, archive billing data, and report and analyze energy consumption data via the Internet.

>   **Deliverables:**

1. Report on status of Implementer or Subcontractor to support the Task
2. EEMIS planning report
3. Procurement of EEMIS
4. Report on EEMIS Installation
5. Training report and maintenance plan
6. Report on actions taken resulting from the benchmarking analysis.
7. Monthly status report

Date Approved (Advice Letter (NTP)): March 2011

Date Completed (est.): Dec 2012   **Date Completed (actual):** Aug 2014

Estimated Cost: $1,468,500   **Final Program Cost:** $2,834,815 ($4,676,228 Budget)

Local Match Contribution: $0

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

Program Budget Unspent: $1,841,413

Best Practices

- Through the work of the Energy Leader Partnership, the Implementer found that most cities were not aware of their energy costs – finance departments were merely paying the bills without analyzing whether there were opportunities to reduce those costs. Manually tracking the electricity bills was an inefficient option for cities that already had limited staff.

  - A "Utility Manager" computer software would allow city staff in other departments to quickly and easily look at their energy usage, to identify anomalies in usage and identify opportunities to reduce usage and, as a result, costs.

  - The Implementer determined that it was cost-prohibitive for individual cities to obtain a Utility Manager software on their own so decided to bring a group of cities together to make obtaining the software more cost-effective.

- The greatest success of the program, and a design that should be considered a best practice, was bringing together a group of participating cities and a regional government partner with existing resources – LA County – to bring a cost-effective Utility Manager software to San Gabriel Valley cities. LA County had been using the EEMIS Utility Manager for 10 years to manage its energy decisions and had the knowledge of and expertise in the program. EEMIS had already been installed, was operating, and had a proven track-record for utility management. The Implementer contracted with LA County to bring the EEMIS software to the Participating Municipalities.

- Contracting with LA County provided several important benefits for the Implementer:

  - It produced significant cost savings, since the Implementer was able to work with a local government and since the software was already operating;

  - The Implementer was able to take advantage of County staff's knowledge and expertise that they had gained by utilizing the software for 10 years.

  - The Implementer was able to serve as a conduit between LA County and the cities and was not only able to coordinate individual city training meetings but was also able to bring together many cities in larger trainings and meetings. This accomplished two (2) things:

    - Individual city staff did not need to work directly with LA County to address larger software issues, saving significant staff time and resources.

    - All of the cities were working together to implement the same software programs in the cities, so, at regional meetings, they were able to share best-practices about implementing and using EEMIS within their cities. These coordinated meetings allowed for more robust discussions about the software and how to most effectively use it within individual cities, creating a better learning environment for the cities.

Lessons Learned

- **Do not engage cities until data was being transferred into the program.** The Implementer should have waited until the data transfer began to engage the cities in EEMIS. At the program's initial outset, cities were extremely excited about the possibilities of the software and its capability to more clearly track the energy usage and costs in their facilities. However, cities had to wait a year before the software was usable and data was being transferred into the program, and many cities were initially extremely frustrated by the delay. Then, by the time the data transfer began, most cities had either forgotten about or lost interest in the software and some were no longer interested in participating. The Implementer had to re-engage these cities that had lost interest but was unable to entirely do so, given the initial frustration and continued delays. If the Implementer had waited to do any work at all with the cities until the data transfer had begun, it would've avoided the cities' initial frustration and it would've been much easier to keep the cities engaged for the duration of the project.

- **Plan for more dedication of resources at the outset to match SCE accounts to municipal facilities.** Both Implementer and LA County underestimated the amount of work that was required in the beginning to match SCE account numbers to municipal facilities. This process was extremely labor-intensive, and most cities did not have the staff time nor initiative to match the accounts. As a result, LA County staff did most of the work matching accounts. However, with the amount of work required for each city, they could only do so much. As a result, many cities were first shown EEMIS data trees that were not effectively matched. Without this matching, EEMIS was effectively useless for the cities. Correcting this discrepancy required a lot of additional LA County staff time and additional coordination from the cities. It was disheartening for city staff to have to do so much initial work before they could even use the software, so many were not inclined to use the software. If more resources had been dedicated to matching these accounts at the beginning, cities may have had more initiative to use the software.

- **More hands-on support for the cities.** The Implementer should have provided more hands-on support, helping cities to identify and save specific reports in the program and even providing the reports for them. Many Participating Municipalities have been facing severe reductions in staff, as a result, none of the Participating Municipalities had a person that had the time to consistently use the software to identify projects. While all cities were excited about the software capabilities and the possibilities for their cities, they did not have time to devote to the program to really see the benefits and be consistently engaged. If the Implementer had provided staff support that did cities' reporting work for them, cities would have been more engaged with the program and would've more clearly seen the value, increasing the likelihood that a City staff person could be devoted to EEMIS in the future.

- **Cities must have more skin in the game.** The Implementer entered into an MOU with LA County to provide the EEMIS program to all participating cities, so that cities do not have to undertake a procurement process or enter into a contractual arrangement with a software provider. While the Implementer entered into an MOU with 25 of the Participating Municipalities, the MOU was primarily related to cities being able to receive staff time reimbursement for their participation, and there were no real requirements for the cities. As a result, when cities opted to not "participate" in

the program, either by not signing CISR forms or not attending meetings, there were no consequences for the cities. The "carrot" approach that the Implementer opted to use – by providing not only free use of the EEMIS program but also providing additional staff reimbursement – did not incentivize participation.

Knowledge Transferred

- The Implementer designed this program to be easily replicable across the region and, as such, intends to share the success, as well as the opportunities for improvements with a variety of groups. The Implementer is actively involved with the "Peer-to-Peer" group of local government partnership implementers and has been sharing best practices and lessons learned throughout the grant program. The Implementer will continue to do so, especially as more information becomes available about how cities are using the EEMIS system. In addition, as The Energy Network will be assuming the costs of the EEMIS software, allowing cities to have more time to explore the software and realize its benefits, the Implementer will work closely with The Energy Network to share best practices and lessons learned, to make the program and the software even more effective for cities into the future. Finally, the Implementer will continue to work with its local government partners at the Los Angeles Regional Collaborative (LARC) to share the success and lessons learned from the implementation of the EEMIS system and, as opportunities arise, can present at conferences across the region.

Next Steps

- Implementer's Staff will continue to work with staff from Participating Municipalities to train them on the use of the utility manager. Additionally, Implementer and LA County staff are working to obtain and incorporate natural gas data.

Benefit to the State

- Developing Energy Action Plans and utilizing a utility manager allow cities to meet statewide energy efficiency goals by setting energy efficiency reduction goals for municipal operations and community wide and then tracking progress through the utility manager.

Benefit to Local Government

- With access to energy usage data, city staff can regularly analyze energy usage, focusing on identifying high usage facilities and identifying energy efficiency projects.

- With access to energy usage data, city staff can verify the energy savings and energy cost savings of implemented projects, which provide justification to management and

> the City Council to complete future energy efficiency projects.

Successes

- SGVCOG worked with LA County to utilize the County's EEMIS system in participating cities.

    o Twenty one (21) cities currently have data being transferred into the EEMIS system. There are 3,487 accounts that are currently being transferred into the EEMIS system.

    o Two (2) additional cities submitted CISR forms at the end of the program cycle and should have the system installed

    o Two (2) cities opted to not submit CISR forms to participate in the EEMIS program.

    o One (1) city submitted the original CISR form, however, due to staff turnover, did not resubmit any necessary forms and asked to no longer participate in the project.

    o One (1) city elected not to participate in the grant due to other outside concerns.

- Training sessions held for Participating Municipalities. Trainings were recorded and available to cities.

Challenges

- Utility billing data process had a protracted delay in impacting the launch of EEMIS.

    o IOUs are enhancing the Green Button system to accommodate these types of data transfers so these delays should occur with future projects.

    o Identifying and labeling municipal facility accounts. Meter location addresses often didn't match facility location causing more intensive analysis to resolve.

- Staff turnover at cities.

    o These new staff were not engaged in the program and had to be introduced to the program.

    o New staff did not take the initiative to effectively use the EEMIS software for energy data analysis

4.2.12   City of Santa Barbara – Phase 2

Local Government Partnership: South Santa Barbara Partnership

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Project Title: Install a Utility Manager System

Project Purpose: Through this task the Partner will establish a Utility Manager System that will enable Implementer to:

1. Track energy use
2. Gather "real time" usage data from qualified facilities
3. Analyze usage data
4. Identify energy efficiency opportunities

Project Scope and Components: Implementer will install a Utility Manager System (UMS) for its municipal facilities. The UMS will provide tools to track energy use, achieve energy cost savings, and track reduction of energy use and GHG emissions due to actions taken. The UMS allows users to review and analyze energy usage data, analyze program savings and identify cost and energy savings opportunities. Site surveys and meter integration assessments at 25 time-of-use metered facilities will be conducted to determine the feasibility of installing interval level data acquisition. Data collection devices, e.g., pulse initiators, were installed at 25 facilities and integrated into the UMS to collect data and transmit to the UMS server.

> **Deliverables:**

1. Draft Utility Manager Assessment and Planning Report
2. Final Utility Manager Assessment and Planning Report
3. Utility Manager Agreement & documentation of procurement of Utility Manager (invoice for purchase of Utility Manager System or if the County of Los Angeles' EEMIS is selected, an agreement between Implementer and the County of Los Angeles to implement EEMIS)
4. Draft Utility Manager Installation Report
5. Final Utility Manager Installation Report
6. Draft Utility Manager Case Study
7. Final Utility Manager Case Study
8. Draft Utility Manager System information dissemination plan
9. Final Utility Manager System information dissemination plan
10. Monthly reports from Utility Manager System
11. Monthly reports of tracked Performance Indicators not included in reports from Utility Manager System

Best Practices/Lessons Learned from Strategic Plan (Draft)

2010-2012 Final Report

Date Approved (Advice Letter (NTP)): December 2011

Date Completed (est.): September 2012 **Date Completed (actual):** December 2015

Estimated Cost: $360,000 **Final Program Cost:** $343,304 ($360,000 Budget)

Local Match Contribution: $30,000

Project Reimbursed for LG Staff Time: Y / N

Program Budget Unspent: $16,696

Best Practices
- The Energy team reviews energy usage monthly and identifies areas of high usage/cost.   - The Energy team analyzes energy usages annually to prepare annual energy efficiency improvement planning process and to prepare the Annual Energy Report which is presented to Council annually   - EEMIS has become the go-to troubleshooting tool when analyzing cost or usage spikes and increases   - EEMIS has become the primary information source when identifying and prioritizing energy opportunities.   - The Implementer relied heavily on the previous research of peer organizations to evaluate the merits of various utility management systems. It was an incredible asset to have much of that research shared with us and saved the Implementer a great amount of time and effort.

Lessons Learned
- One factor was having our IS team inform us anytime they moved any network equipment because it would stop our data transfers. Having experience the interruption of data a number of times, we managed to have the IS team agree to giving us a warning before they did work on the network so that we could at least check to make sure we were receiving data after and fix the issue if we weren't.   - It is critically important to get as many of the stakeholders on board with the program at the outset and to explain the benefits of the system once it is installed.   - Work with an experienced contractor. . It is also of utmost importance to have a contractor that can thoughtfully and clearly explain processes and procedures   - The Utility Manager system should be easy to use. If the program is too complicated, it will not get used.

Knowledge Transferred

- The Implementer intends to become a resource for other jurisdictions, just as the Implementer was able to rely on peers for assistance.

Next Steps

- Develop report templates to be used by Facility Energy Managers throughout the city's campus

- Compile data on a monthly basis in order to identify peaks and troughs and opportunities for energy savings

Benefit to the State

- A replicable model for other local governments to follow and increase energy efficiency, contributing to an effective aggregate effect at the State level.

Benefit to Local Government

- The Implementer is able to pull real-time usage reports and compare past energy costs with current ones to see what energy efficiency and conservation efforts are working and where improvements can continue to be made.

Successes

- The Implementer installed the McKinstry EEMIS and installed pulse initiators and receivers at the 25 largest electrical accounts and the three (3) largest gas accounts. These are what the system analyzes for usage trends.

- The data from the Implementer's 500 billing accounts (including historical data dating back to 2010) is being imported into the system so that billing trends and anomalies can be identified.

Challenges

- Data transfer issues with SCE delayed the project.

- Hardware issues took time to get worked out.

4.2.13   County of Santa Barbara – Phase 2

Local Government Partnership: South Santa Barbara Partnership

Project Title: Utility Manager System & ENERGY STAR Portfolio Manager

Project Purpose: Through this task the Implementer will install a Utility Manager system that will enable it to effectively monitor and manage energy use at its facilities. The Utility Manager system has to be web-based so every Implementer employee could access the data to see how well their individual building was doing and compare to previous years.

Project Scope and Components: Implementer will deploy a Utility Manager System (UMS) for its facilities. The UMS will provide tools to track energy use, achieve energy cost savings, and measure reduction in energy use and GHG emissions. The UMS allows users to review and analyze energy usage data, analyze program performance and identify energy and cost saving opportunities. The UMS will allow the use of sub-meters to track the energy usage of Implementer facilities in campus settings. Implementer will establish the appropriate Portfolio Manager accounts, as described in the Benchmarking Policy (SP Task 3.1.1).

> **Deliverables:**

1. Documentation of establishment of U.S. EPA ENERGY STAR Portfolio Manager accounts
2. Draft Utility Manager System Assessment and Planning Report
3. Final Utility Manager System Assessment and Planning Report
4. Utility Manager System Agreement & documentation of procurement of Utility Manager System (invoice for purchase of Utility Manager System or if the County of Los Angeles' EEMIS is selected, agreement between Implementer and the County of Los Angeles to implement EEMIS)
5. Draft Utility Manager System Installation Report
6. Final Utility Manager System Installation Report
7. Draft Utility Manager System Case Study
8. Final Utility Manager System Case Study
9. Draft Utility Manager System information dissemination plan
10. Final Utility Manager System information dissemination plan
11. Monthly reports from Utility Manager System
12. Monthly reports of tracked Performance Indicators not included in reports from Utility Manager System

Best Practices/Lessons Learned from Strategic Plan (Draft)

2010-2012 Final Report

Date Approved (Advice Letter (NTP)): December 2011

Date Completed (est.): February 2013   **Date Completed (actual):** April 2013

Estimated Cost: $279,999   **Final Program Cost:** $421,998 ($492,766 Budget)

Local Match Contribution: $0

Project Reimbursed for LG Staff Time: Ⓨ / N

Program Budget Unspent: $70,768

Best Practices
• The integration of ENERGY STAR Portfolio Manager with EnergyCAP. As part of the software set-up, EnergyCap's Utility Manager System was configured to automatically integrate with ENERGY STAR Portfolio Manager. This required uploading building and energy consumption data to both Portfolio Manager and Utility Manager and working with SCE to set up automatic monthly uploads. As part of the process, time was spent making sure the energy data for each building was correct, and data transferring from one system to another was accurate.

Lessons Learned
• **Selecting a Utility Manager vendor.** A large part of the task was spent evaluating and interviewing Utility Manager vendors.
o The biggest reason for this was the niche Utility Manager market and the limited number of vendors.
o Another limitation was that the budget we requested did not allow us to access a broader spectrum of vendors or the more expansive services available from the vendors we did interview.
Either way, though the tool we selected and are currently using is adequate, the Implementer could have benefited from a more robust and higher analytical tool. The lessons learned for the Implementer was that better understanding the marketplace of vendors and evaluating all vendors at the same time against the Implementer's key criteria, could have helped the Implementer select the appropriate vendor within a faster timeframe.
• **Expect integration issues if sub-meters are use.** Integrating sub-meters (installed to allow data for individual buildings of a campus metered configuration) was challenging. Even after the Utility Manager System was set-up and running, it still took a few months to identify and fix data issues that affected the data the system was showing.

Knowledge Transferred
• This document serves as the primary mechanism of conveying best practices and lessons learned from this task. However, the implementer is available to discuss this further with any interested parties.

Next Steps

• The County of Santa Barbara pursued the following tasks for the 2013-2014 Strategic Solicitation Pilot:
    o Green Building Code
    o Energy Efficiency Revolving Fund

Benefit to the State
• The State will benefit from the installation of the utility manager program by enabling the Local Government to identify energy usage patterns and target energy reduction strategies where impacts can be optimized, thereby reducing energy use and GHG emissions.

Benefit to Local Government
• The Implementer has used the Benchmarking, Utility Manager and RCx Policy to identify high energy users and make improvements. • One of the first buildings to be identified as a poor performer, as a result of its ENERGY STAR score, became the first building to undergo an RCx assessment.

Successes
• The Implementer selected EnergyCAP as its Utility Manager system. • Installed sub-meters to gather building level data from campus –like facilities that are served by one master meter. • The integration of ENERGY STAR Portfolio Manager with EnergyCAP. As part of the software set-up, EnergyCap's Utility Manager System was configured to automatically integrate with ENERGY STAR Portfolio Manager. This required uploading building and energy consumption data to both Portfolio Manager and Utility Manager and working with SCE to set up automatic monthly uploads. As part of the process, time was spent making sure the energy data for each building was correct, and data transferring from

one system to another was accurate.

Challenges
• Integrating sub-meters (installed to allow data for individual buildings of a campus metered configuration) was challenging. Even after the Utility Manager System was set-up and running, it still took a few months to identify and fix data issues that affected the data the system was showing.

4.2.14   City of Simi Valley – Phase 1

Local Government Partnership: Simi Valley Partnership

Project Title: Utility Manager Software System

Project Purpose: Install a Utility Manager system that enables Implementer to track and manage energy usage, as well as develop energy usage profiles for each facility. Using these data Staff will be able to identify energy saving opportunities, quantify the impact of energy saving measures, and manage energy costs for Implementer's facilities.

Project Scope and Components: The Program will proactively track and manage energy usage in all of the Implementer-owned facilities.

Deliverables:

1. Report on status of Implementer or Subcontractor to support the Task
2. Utility manager installation planning report
3. Report on Utility Manager installation
4. Report of Utility Manager training   and maintenance activities
5. Monthly status report

Date Approved (Advice Letter (NTP)): March 2011 (March 2011)

Date Completed (est.): December 2012   **Date Completed (actual):** March 2013

Estimated Cost: $111,930   **Final Program Cost:** $125,495 ($130,000 Budget)

Local Match Contribution: $0

Project Reimbursed for LG Staff Time: Y / N

Program Budget Unspent: $0

Best Practices

- The Implementer is now empowered to effectively manage the energy consumption and costs within municipal operations. The utility management software will be an essential to in measuring progress in reaching energy reduction goals as well as supporting efforts to identify underperforming building and other municipal facilities (e.g., well stations).

- The Implementer will display the energy use in city facilities in a kiosk that will be available in the lobby of City Hall for the general public to use.

Lessons Learned

- The Implementer learned that an effective energy management strategy requires the tracking of energy usage. Data can help to drive decision and policy making. The Implementer will use utility management software to track the energy usage of all municipal facilities in the future.

Knowledge Transferred

- This document serves as the primary mechanism of conveying best practices and lessons learned from this task. However, the implementer is available to discuss this further with any interested parties.

Next Steps

- Once training is completed, the Implementer will participate in EEMIS Expansion and Local Government Energy Efficiency Resources Plan promotional activities, workshops, training events, orientation meetings, etc.

- The Implementer will obtain, generate and maintain data requested by LA County regarding Implementer's municipal building energy usage, other facility technical information, and potential energy efficiency project information which are to be used solely for the implementation of EEMIS Expansion and Local Government Energy Efficiency Resources Plan tasks.

Benefit to the State

- The State will benefit from the installation of the utility manager program by enabling the Local Government to identify energy usage patterns and target energy reduction

strategies where impacts can be optimized, thereby reducing energy use and GHG emissions.

Benefit to Local Government

- Enhanced ability to evaluate and make decisions on energy efficiency to optimize facility and equipment performance by tracking energy usage

- The Implementer will be better positioned to identify under-performing facilities and direct resources to improve performance of these buildings

- Working with LA County and SoCal REN to develop data to support and implement projects.

- Key staff received Utility Manager Software training to improve their capacity to implement energy efficiency projects.

- Staff training is an important component of the project. Building operators will need to be trained in the use of the program, and in interpreting the graphs and reports so as to be able to use the program to its full advantage.

Successes

- The Implementer selected LA County's EEMIS system for its Utility Manager. It includes a sophisticated modeling tool for predicting hourly energy use using various input parameters (day of week, hour of day, ambient temperature, previous energy use, etc.) Data collected can be customized for specific loads or buildings. Demonstrations of the EEMIS system showed that it continually calculates the difference between actual and expected energy to identify over consumption and/or energy savings relative to a baseline comparison period and reports these calculations in a user-friendly format. In addition, software will calculate total and "saved" carbon emissions that result from energy saving activities.

- Sub-meters were installed at selected buildings (one meter per building) to better monitor consumption and demand patterns. The installer provided and installed interval meters for all of the buildings targeted for the monitoring and tracking program after pulse initiators were provided and installed by Southern California Edison to provide interval data suitable for use by the energy monitoring system.

- The City procured an information kiosk to be placed in the City Hall lobby to display EEMIS data and connect users to IOU websites for information on benchmarking and energy efficiency.

- The project included installation of interval meters at selected buildings (one meter per building) to better monitor consumption and demand patterns. The Consultant provided and installed interval meters for all of the buildings targeted for the monitoring and tracking program after pulse initiators were provided and installed by Southern California Edison to provide interval data suitable for use by the energy monitoring

system.

Challenges
• Ongoing costs to maintain the system and ongoing technical issues could make it unsustainable.   o The Implementer negotiated acceptable pricing terms with the vendor which included all accounts and desired functionality (and vendor will continue to provide technical support, although timing remains an issue)

4.2.15 South Bay Cities Council of Governments – Phase 1

Local Government Partnership: South Bay Partnership

Participating Municipalities: Carson, El Segundo, Gardena, Hawthorne, Hermosa Beach, Inglewood, Lawndale, Lomita, Manhattan Beach, Palos Verdes Estates, Rancho Palos Verdes, Redondo Beach, Rolling Hills Estates, and Torrance.

Project Title: Set up a "Utility Manager" computer program to track municipal usage. Identify need for sub-metering to plan, budget and manage bills.

Project Purpose: Through the Program, the Implementer will enable Participating Municipalities to use a Utility Manager Software system to track and benchmark of municipalities' facilities. By using a common Utility Manager system the Implementer will be able to compare facilities among the Participating Municipalities to assist in identifying and prioritizing. The Utility Manager will enable the Participating Municipalities to:

- Streamline energy project development to reduce energy and administrative waste;
- Inform the budgeting process;
- Track and benchmark energy usage;
- Identify demand response potential; and,
- Provide ongoing measurement and verification (M&V).

Project Scope and Components: Implementer will select and deploy a Utility Manager for Participating Municipalities. The Utility Manager will provide tools to track energy use, achieve energy cost savings, and set up a system to measure success in reducing energy use and greenhouse gas emissions. Implementer will ensure that the selected EEMIS will allow users to

review and analyze energy usage data, allowing for analysis of program success and ways to maximize all available cost and energy savings opportunities.

Deliverables:

1. Kickoff meeting with Los Angeles County and an understanding of the timeline
2. EEMIS/Utility Manager Assessment and Planning Report completed for review and comment by SCE
3. Procure Utility Manager/EEMIS System
4. EEMIS/Utility Manager Assessment and Planning Report
5. Create Program Management Plan (PMP) template
6. Begin implementation of PMP for each Participating Municipality
7. Recruit and enroll participants in Utility Manager EEMIS from Participating Municipalities; customize PMP for each Participating Municipality
8. Test network connectivity and functionality for facilities of each Participating Municipality
9. Prepare Utility Manager/EEMIS Installation Report
10. Assess the value and benefits of the Program and report list of identified needs as they occur.
11. Deliver Monthly reports from EEMIS system

Date Approved (Advice Letter (NTP)): March 2011

Date Completed (est.): Dec 2012   **Date Completed (actual):** October 2014

Estimated Cost: $709,700   **Final Program Cost:** $1,003,190 ($900,480 Budget)

Local Match Contribution: $0

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

Program Budget Unspent: $0

Best Practices
• For meter location data, applied cost-effective geo-tagging through smartphone and Google Maps URLs versus using expensive and bulky GIS equipment for vague service addresses lacking street number
• Anonymous Benchmarking functionality in EEMIS allows cities to compare their facilities against other, similar facilities that are in EEMIS.

Lessons Learned
- Top management support needed   - Designated city and finance staff to help navigate city and access to accounting   - As local government led project, understood constraints of government and designed the EEMIS implementation to minimize city staff impact by using Implementer's Project Manager   - Prepare and submit CISR forms as soon as possible, ensure all signatures on form before submitting to city manager or other city personnel with authorization to sign   - Organize service accounts according to facility names and departments that make sense to city , and categorize under General Fund or Enterprise Fund (or other naming/budgeting convention used by city)   - Personnel who can research, understand energy management, form and maintain relationships, communicate clearly vital to a successful EEMIS outcome

Knowledge Transferred
Providing accessible and automated energy use and demand billing data across multiple city departments to front-line city staff instead of having paper bills that city staff usually has difficulty locating. This allows for continuous monitoring and tracking of energy use as part of a holistic energy efficiency program within municipal operations.

Next Steps
Consider monitoring based commissioning program similar to the UC/CSU partnership as this Partnership is already partly setup for this due to the 14 out of the 15 cities enrolled in the utility bill manager. Two cities also have real-time monitoring in conjunction with the utility bill manager. This allows for identifying deeper energy savings and also incorporates a training program for public agency staff which is important to make an energy efficiency program sustainable.

Benefit to the State
Local governments lead by example in their municipal operations as based on the California Long Term Energy Efficiency Strategic Plan.

Benefit to Local Government

- Monthly, quarterly, and annual reports generated to analyze energy use across departments to locate energy project development opportunities

- Streamlined reporting with organized energy data for SCE's incentive applications

- Allows for better understanding of cities' energy use and loads behind meter for use in identifying energy efficiency measures

Successes

- Implementer selected LA County's EEMIS system for the Utility Manager for its Participating Municipalities. Fourteen of the 15 LGs are participating. The 15th LG was very small and felt the benefit of a Utility Manager was minimal.

- Two LGs had campus facilities where multiple buildings were served by a single master meter. The LGs installed sub-meters to be able to monitor energy use at the individual buildings at these campuses.

- Enrolled approximately 2,400 utility service accounts into EEMIS for the 14 Participating Municipalities

- Streamlined energy project development

- Installed real-time energy monitoring at city hall for two cities with over 200 kW demand

- Identified high Energy Use Intensity (EUI) buildings for benchmarking

- Provided energy performance reports to help cities establish an energy re-investment fund

- Expedited Energy Action Plan preparation for two cities

- Contributed to helping two cities achieve Platinum under SCE's Energy Leader Partnership

Challenges

- Establishing automated data transfer process with SCE. Process was worked out. Future efforts will benefit from the development of the "Green Button" system the IOUs are developing.

- Unable to identify energy loads behind some meters, which makes energy measures more difficult for city staff

- City staff was unable to located service address without street number

  - Overcame this challenge by using cost-effective technology via smartphone app to locate latitude and longitude or Google Maps (do not have to use expensive GIS equipment)

4.2.16   City of South Gate – Phase 1

Local Government Partnership: South Gate Partnership

Project Title: Implement EEMIS and Set-up ENERGY STAR Portfolio Manager to Track Municipal Energy Usage

Project Purpose: Establish a Utility Manager system that will allow the Implementer to review and analyze energy usage for energy efficiency opportunities. Having utility data available and accessible enables Implementer to manage the energy efficiency more effectively.

Project Scope and Components: Implementer will establish the appropriate Portfolio Manager accounts, as described in the Benchmarking Policy to enable near-term municipal usage tracking and benchmarking procedural training. The Implementer will select and deploy EEMIS to provide energy usage data on all Implementer municipal facilities. Implementer will ensure that the selected EEMIS will allow users to review and analyze energy usage data, allowing for analysis of Program success and ways to maximize all available cost and energy savings opportunities.

Deliverables:

1. Documentation of establishment of U.S. EPA ENERGY STAR Portfolio Manager accounts
2. EEMIS Assessment and Planning Report
3. Documentation of procurement of EEMIS (invoice for purchase of EEMIS or if the County of Los Angeles' EEMIS is selected, MOU between Implementer and the County of Los Angeles to implement EEMIS)
4. Draft EEMIS Installation Report
5. Final EEMIS Installation Report
6. Contact information for Implementer representative available to present findings
7. Draft Benchmarking Case Study
8. Final Benchmarking Case Study
9. Monthly report of tracked Performance Indicators

Date Approved (Advice Letter (NTP)): March 2011 (May 2011)

Date Completed (est.): October 2012   **Date Completed (actual):** October 2013

Estimated Cost: $139,000   **Final Program Cost:** $887,332 ($886,000 Budget)

Local Match Contribution: $0

Project Reimbursed for LG Staff Time: Ⓨ / N

Program Budget Unspent: $0

Best Practices
• The Implementer is working with EnergyCAP to develop a file reformatter. The reformatter will allow the Implementer to structure the SCE data file received via MFT in an acceptable format to import into EnergyCAP's system. The Implementer has over 100 accounts, so the reformatter will allow for a more efficient import of utility data versus manual data entry.

Lessons Learned
• The Implementer learned that an effective energy management strategy requires the tracking of energy usage. Data can help to drive decision and policy making. The Implementer will use utility management software to track the energy usage of all municipal facilities in the future.

Knowledge Transferred
• This document serves as the primary mechanism of conveying best practices and lessons learned from this task. However, the implementer is available to discuss this further with any interested parties.

Next Steps
▪ Implementer will continue training to improve ability to maximize benefit of the UMS.

Benefit to the State
• The State will benefit from the installation of the utility manager program by enabling the Local Government to identify energy usage patterns and target energy reduction strategies where impacts can be optimized, thereby reducing energy use and GHG emissions.

Benefit to Local Government
• The local government will benefit from the installation of the utility manager program by enabling the Local Government to identify energy usage patterns and target energy

> reduction strategies where impacts can be optimized, thereby reducing energy use, energy costs, and GHG emissions.

Successes
• The Implementer selected EnergyCAP as the chosen Utility Manager vendor after a thorough assessment of the available utility management software providers.
• An account with Portfolio Manager was established that includes 10 buildings.
• An education and training program was developed for key staff.
○ The Implementer negotiated acceptable pricing terms with the vendor which included all accounts and desired functionality (e.g., weather normalization, calendarization)

Challenges
• Ongoing costs to maintain the system could make it unsustainable.

4.2.17 County of Ventura – Phase 1

Local Government Partnership: Ventura County Partnership

Project Title: Establish a Utility Manager System

Project Purpose: Establish a Utility Manager system for Implementer's facilities that enables the Implementer to analyze, assess, evaluate, monitor, and manage its energy usage on a regular basis.

Project Scope and Components: The Implementer will install a Utility Manager system adequate to meet the needs of the Implementer. Implementer will procure all required software purchases and activities to make Utility Manager Software functional for tracking municipal energy usage.

> **Deliverables:**
>
> 1. Report on status of Implementer or Subcontractor to support the Task
> 2. Utility manager Assessment and Planning Report
> 3. Report on Utility Manager installation

4. Report of Utility Manager training and maintenance activities

5. Monthly status report

Date Approved (Advice Letter (NTP)): March 2011 (May 2011)

Date Completed (est.): Sep 2012 **Date Completed (actual):** Sep 2013

Estimated Cost: $225,000 **Final Program Cost:** $1,001,068 ($1,000,000 Budget)

Local Match Contribution: $0

Project Reimbursed for LG Staff Time: (Y) N

Program Budget Unspent: $0

Best Practices
• Engage all agencies/departments since initial discussions
• Take all needs into account but know that not all can be accomplished. Choose what makes most sense for whole county in order to choose best product

Lessons Learned
• Regular annual analysis of usage focused on identifying high usage facilities, helped ease transition to UMS
• The gathering utility data into one platform allows for the ability to track and monitor costs over time and identify any abnormalities in consumption.

Knowledge Transferred
• All county agencies can now asses utility information and can better plan with respects to both facilities and budgets.

Next Steps
• Continue to update and use UMS to be sure that all accounts are captures. Run annual reports to analyze energy use.

Benefit to the State

- The State will benefit from the installation of the utility manager program by enabling the Local Government to identify energy usage patterns and target energy reduction strategies where impacts can be optimized, thereby reducing energy use and GHG emissions.

Benefit to Local Government

- By accumulating utility data into one platform allows for the ability to track and monitor costs over time and identify any abnormalities in consumption. Which will lead to identifying potential EE projects

- The UMS (Ecova) will provide an easy way to monitor and assess utility costs and usage as well and help to identify, develop, implement, and validate expense reduction measures.

Successes

- The Implementer selected Ecova as its Utility Manager system.

- Sub-meters were installed at the Juvenile Justice Complex and a Jail. These buildings ae part of a campus-type of facility where there is one meter serving all buildings on the campus.

Challenges

- No significant challenges were encountered in this task.

4.2.18   Western Riverside Council of Governments – Phase 2

Local Government Partnership: Western Riverside Energy Leader Partnership

Participating Municipalities: Temecula, Murrieta, Hemet, Lake Elsinore, and San Jacinto.

Project Title: Identify, Purchase, and Install Utility Manager Software to Track Energy Consumption of Buildings Operated by Participating Municipalities

Project Purpose: Provide Participating Municipalities access to a Utility Manager system that allows the municipalities to analyze facility energy consumption, archive billing data, and report and analyze energy consumption data.

Project Scope and Components: The Implementer will facilitate the procurement of the right to use Utility Manager Software adequate to meet the needs of Participating Municipalities. Implementer will procure all required software purchases and activities to make Utility Manager Software functional for tracking municipal energy usage.

Deliverables:

1. Report on status of Implementer or Subcontractor to support the Task
2. Utility Manager planning report
3. Procurement of Utility Manager software
4. Report on Utility Manager Software Installation
5. Report of Utility Manager Training and Maintenance activities
6. Monthly status report

Date Approved (Advice Letter (NTP)): December 2011 (December 2011)

Date Completed (est.): Dec 2012   **Date Completed (actual):** Apr 2015

Estimated Cost: $157,600   **Final Program Cost:** $1,173,196 ($2,061,593 Budget)

Local Match Contribution: $0

Project Reimbursed for LG Staff Time: Ⓨ / N

Program Budget Unspent: $888,397

Best Practices
• Implemented all municipal facility electric data into EnergyCAP for ongoing input of data this utility management software for the participating municipalities. This will allow City staff to analyze utility consumption in their municipal facilities and operations, and perform internal audits to identify high users and future project focuses to best save energy and reduce utility costs. Also training all appropriate staff and created a living education procedural manual for them to update moving forward.

Lessons Learned
• Most of the municipalities in the sub-region do not have energy focused staff to identify the most cost-effective and energy efficient processes.   o EnergyCAP will assist those staff, without in-depth knowledge of energy efficiency, to identify some of the locations in the Municipality to start with

implementing energy efficiency measures.

- The delivery of data requested from utilities took a long time.

  o The "Green Button" systems being developed by the IOUs should address this data issue.

Knowledge Transferred

- With the application of this software, Utility Managers will be able to identify the municipal energy usage of their facility.

- Such information is useful to compare with other municipalities and identify best practices methods to aid with the reduction of energy use which in turn will result in the reduction of GHG's.

Next Steps

- As data are entered into EnergyCAP, comparisons between energy consumption can be made by month, by year, on both at the City and facility levels. These varying levels of analysis will allow each Participating Municipality to assess overall decreases in consumption on all facility as well as providing ongoing analysis of the top energy users in the Participating Municipality.

Benefit to the State

- The State will benefit from the installation of the utility manager program by enabling the Local Government to identify energy usage patterns and target energy reduction strategies where impacts can be optimized, thereby reducing energy use and GHG emissions.

- Implemented measure will aid with the reduction of greenhouse gas emissions (GHG's) such as AB 32.

Benefit to Local Government

- Participating municipalities showed interest in tracking projects to identify realistic energy and utility cost savings per building with implemented projects.

Successes

- Implementer selected EnergyCAP for its Utility Manager system. Five LGs elected to have EnergyCAP installed.

- Implemented all municipal facility electric data into EnergyCAP for ongoing input of data this utility management software for the participating municipalities of: Hemet, Lake Elsinore, Temecula, Murrieta, and San Jacinto. This will allow City staff to analyze utility consumption in their municipal facilities and operations, and perform internal audits to identify high users and future project focuses to best save energy and reduce utility costs. Also training all appropriate staff and created a living education procedural manual for them to update moving forward.

Challenges

- The only deviation from goal was the amount of City's that participated. Change in staff, length of project, and most importantly the amount of City facilities (and lack thereof) were factors leading multiple jurisdictions becoming uninterested. The Western Riverside region includes many new cities that have very few, and often, no City-owned facilities.

- Most of the municipalities in the sub-region do not have energy focused staff to identify the most cost-effective and energy efficient processes.

  o EnergyCAP will assist those staff, without in-depth knowledge of energy efficiency, to identify some of the locations in the Municipality to start with implementing energy efficiency measures.

- The delivery of data requested from utilities took a long time.

  o The "Green Button" systems being developed by the IOUs should address this data issue.

- Implementer had to change consultants in the middle of the project because the consultant didn't stay within agreed upon scope of work.

- Engaging City staff to implement ongoing use of this tool was a challenge.

4.3 Strategic Plan Task 3.2.1 – Local Government EAP/CAP

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

4.3.1 City of Brea – Phase 1

Local Government Partnership: Community Energy Partnership

Project Title: Develop EE Chapter of Municipal CAP

Project Purpose: Develop and adopt an energy efficiency chapter for inclusion in the Implementer's CAP

Project Scope and Components: Develop an energy efficiency Chapter for inclusion in a future CAP that provides a clear road map of energy efficiency goals and strategies over the CAP planning horizon. The energy efficiency Chapter will address building codes and potential improvements. Most of the components of the energy efficiency Chapter will contain specific time-bound activities and a designated responsible party for implementation. In drafting the CAP, Implementer will pursue the identification of the new and innovative concepts to build upon existing templates that have already proven to be effective.

Deliverables:

1. Report on Status of Consultant or Subcontractor to Support the Task.
2. Assessment and Plan for Development of the Energy Efficiency Chapter of implementer's CAP.
3. Draft Energy Efficiency Chapter for CAP
4. Report on Stakeholder Input: Energy Efficiency Chapter of CAP
5. Final Energy Efficiency Chapter for CAP
6. Monthly reports of tracked Performance Indicators

Date Approved (Advice Letter (NTP)): March 2011 (April 2011)

Date Completed (est.): November 2012   **Date Completed (actual):** March 2013

Estimated Cost: $102,870   **Final Program Cost:** $241,581 ($241,153 Budget)

Local Match Contribution: $0

Project Reimbursed for LG Staff Time: Ⓨ / N

Program Budget Unspent: $0

Best Practices
• **Shaping the Work.** The Sustainability Plan was to be formatted as an element for the General Plan. When the Implementer updates its General Plan in the next 2 to 3 years, it will insert the Sustainability Plan into the General Plan as the "Sustainability Element." This ensures the Implementer developed a means to greatly leverage this effort by codifying language in its General Plan that will memorialize the work in Brea and create a major efficiency impact.
• **Get The Right People on the Team.** The development of the Sustainability Plan was shepherded by trusted city officials, the energy committee. This is a powerful and senior group, one that fully understands their community and respects the importance

of their work. Its deep involvement in the process speaks to the value that the Implementer put on this task.

- **Rigorous Analysis.** Each measure, chosen from a list of more than 400 measures, was carefully screened by the Implementer, suited to local conditions, and vetted by Implementer's officials and staff. Significant detailed analysis went into the project.

- **Diligence and Proficiency.** The Sustainability Element's development was a group process, with multiple sets of timely edits. Implementer's officials were highly attentive to the process. Plans to reduce emissions were carefully considered and modified to be best suited to the community. Rather than delay the planning process, the Planning office made this process a priority. This kept project momentum and in turn enthusiasm, and as such translated into a superior product.

- **Maximize Community Benefit.** Staff understands their leaders' directions and they understand the community and its interests. Throughout the process, the focus was on fiercely guarding this culture, and making sure that the Sustainability Element reflected community values and maximum community benefit.

Lessons Learned

- The primary lesson learned with the development of the energy efficiency chapter of the climate action plan, is that the process and product can indeed be very valuable to the Implementer.

- The officials and Staff took the project seriously. Similarly, the Implementer's constituents contributed with residents and the business community providing valuable input into the plan.

Knowledge Transferred

- Energy Efficiency Chapter has been posted on the City website

Next Steps

- Where possible, City will implement measures that have been recommended in the Energy Efficiency Chapter

Benefit to the State

- The State will benefit from the municipal EAP/CAP developed through this task by the reduced energy use when the plan is implemented. The EAP/CAP has energy reduction goals and energy reduction strategies that, when implemented, will reduce energy use and GHG emissions. The EAP/CAP is in alignment with California's Long

Term Energy Efficiency Strategic Plan, as well as AB32.

- Any efficiencies gained on the part of the Implementer mean that less of the State's resources must be used.

Benefit to Local Government

- When the Implementer updates its General Plan in the next 2 to 3 years, it will insert this Sustainability Plan into the General Plan as the "Sustainability Element." This is a home run for the project, the Implementer and SCE developed means to greatly leverage the project, codifying language in its General Plan that will memorialize the work in Implementer and create a major efficiency impact.

Successes

- The Energy Efficiency Chapter of the Climate Action Plan is the Implementer's first Sustainability Plan. It will guide the Implementer in implementing cost-effective energy efficiency measures, while exploring the broader universe of mitigation measures related to climate action. The Sustainability Plan was developed and written so it could be seamlessly incorporated into the Implementer's General Plan when it is next updated.

- The Implementer received positive feedback from the community which made it easier for the Implementer to adopt a voluntary reach code. Input from the community helped to shape a code that was amenable to all stakeholders.

Challenges

- There was little internal support for a mandatory Reach Code.

4.3.2   Coachella Valley Association of Governments – Phase 1

Local Government Partnership: Desert Cities Partnership

Participating Municipalities: Blythe, Cathedral City, Desert Hot Springs, Indian Wells, Palm Springs, Rancho Mirage, and the Agua Caliente Band of Cahuilla Indians

Project Title: Municipal Energy Action Plan

Project Purpose: Develop an Energy Action Plan for the municipal operations of each Participating Municipality for adoption. The EAP will identify energy efficiency strategies specific to each municipality. A key element of the EAP is that it will integrate energy policies and

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procedures into the jurisdiction's governance structure, as well as other resource efficiency efforts such as climate action planning.

Project Scope and Components: Energy Action Plan: The Implementer will develop an Energy Action Plan ("EAP") framework for municipal facilities that can be adapted to the needs of individual Participating Municipalities ("EAP Framework"). The EAP Framework will focus on a comprehensive analysis of energy efficiency opportunities for local governments to reduce energy consumption, achieve increased energy efficiency, and reduce greenhouse gas emissions.

   Deliverables:

1. EAP Assessment and Planning Report
2. EAP Framework
3. Report on EAP Stakeholder Input
4. Draft EAP for each Participating Municipality
5. Final EAP for each Participating Municipality
6. For each Participating Municipality - Resolution adopting EAP or documentation of why EAP was not adopted and related alternate plans
7. Draft EAP Best Practices Report
8. Final EAP Best Practices Report
9. Draft EAP information dissemination plan
10. Final EAP information dissemination plan
11. Monthly reports of tracked Performance Indicators

Date Approved (Advice Letter (NTP)): March 2011 (March 2011)

Date Completed (est.): Aug 2012 **Date Completed (actual):** December 2014

Estimated Cost: $574,000   **Final Program Cost:** $3,924,823 ($4,915,380 Budget)

Local Match Contribution: $0

Project Reimbursed for LG Staff Time: Ⓨ / N

Program Budget Unspent: $990,557

Best Practices

- Develop personal relationships with the jurisdictions and service providers involved and being sure they understood the value of the EAP. Without this understanding, the work involved in completing the EAP would have been seen by local government staff as just another burden added to an already heavy work schedule.

- Interviews with staff were key to getting info on key stakeholders, relevant city policies, and politics.

- At the beginning of the project:

    o Clearly identify and lay out the benefits to the jurisdiction and to individual staff members -- of participating in the Energy Action Plan process.

    o Identify exactly which staff person holds what information, whether it is historical information, knowledge of current projects, etc. No one staff person has all the pertinent information.

- Communicate frequently with all the jurisdictions about the benefits of the project, what to expect and when to expect it, deadlines, etc.

Approval of EAPs

- Public officials were receptive to the Energy Action Plans and were interested in the data provided about their city's energy use and their annual expenditures for electricity.

- The open houses held at each jurisdiction for city staff and officials at the beginning of the program were extremely effective in raising awareness and support for Green for Life. The Best Practices – Green for Life Energy Action Plans Page 13

- Informal atmosphere encouraged participants to ask questions and learn more about energy action planning.

- Public officials believed that adopting the Energy Action Plans was proactive and was good for their city. They expressed appreciation for SCE and the CPUC for making the opportunity available.

- Jurisdictions were willing to establish reach goals for energy savings. Having data available from SCE to demonstrate their past success in reducing energy use helped make the case that these goals were reasonable.

- Integrating the Energy Action Plans with other energy efficiency, climate action, and sustainability tools through the Green for Life program was a very effective strategy. Combining these plans and policies into a "sustainability package" for consideration by city councils at one time made the adoption process very smooth.

- Including the Benchmarking Policy and the Commissioning/Retro-commissioning policy as appendices to the Energy Action Plan was successful in gaining approval of these policies, in effect killing two birds with one stone.

- Presentations at Planning Commissions, Architectural Review Boards and City Councils were the most effective way to reach out to public officials.

- Public officials were concerned about the potential cost of implementing the Energy Action Plans and any economic impacts associated with the program. Following the

recession, availability of funds for capital improvements will continue to be a challenge for jurisdictions. Options for funding including financing, grants and other sources will be essential to success.

Lessons Learned

General Overview

- Take time at the beginning of the process to clearly identify and lay out the benefits to the jurisdiction – and to individual staff members -- of participating in the Energy Action Plan process. This is especially important since having an EAP is not an absolute requirement for a jurisdiction.

- Spend time at the beginning of the process to identify exactly which staff person holds what information, whether it is historical information, knowledge of current projects, etc. No one staff person has all the pertinent information.

- Communicate frequently with all those participating in the process about the benefits of the project, what to expect and when to expect it, deadlines, etc.

- The GHG Inventories provided initial guidance for which areas where there are opportunities for energy efficiency.

- Physical inventories of municipal buildings identified specific opportunities.

- Having the ability to "filter" measures based on cost, savings or pay-back gave staff meaningful ways to discuss and decide on priorities.

- Develop template document at beginning of the report writing process that includes outline of chapters and formatting

Data Collection

- Presentations at Planning Commissions, Architectural Review Boards and City Councils were the most effective way to reach out to public officials.

Approval of EAPs

- Presentations at Planning Commissions, Architectural Review Boards and City Councils were the most effective way to reach out to public officials.

- Coordination of the EAPs through the Implementer provided the opportunity to raise awareness about the benefits of energy action planning at Implementer's committee meetings of city managers (Technical Advisory Committee) and elected officials (Energy & Environmental Resources Committee, Executive Committee).

Knowledge Transferred

- Through the Energy Leader Partnership, the Implementer has disseminated Green for Life program information to partners including the Coachella Valley Economic

Partnership, Desert Valleys Builders Association, local water districts, and other local governments not served by SCE. We will continue to share information through our Green for Life website, articles in jurisdiction newsletters and websites, outreach events, presentations to community groups, and media/social media outreach.

Next Steps

- Identify tools for helping jurisdictions track their progress in meeting Energy Action Plan goals and targets.

- Celebrate their successes!

Benefit to the State

- The State will benefit from the municipal EAP/CAP developed through this task by the reduced energy use when the plan is implemented. The EAP/CAP has energy reduction goals and energy reduction strategies that, when implemented, will reduce energy use and GHG emissions. The EAP/CAP is in alignment with California's Long Term Energy Efficiency Strategic Plan, as well as AB 32.

- Seven local jurisdictions adopted Energy Action Plans, consistent with the California Long Term Energy Efficiency Strategic Plan (CLTEESP).

Benefit to Local Government

- The development of the Energy Action Plans was one of the most appreciated benefits of Green for Life from the perspective of city officials. The Green for Life strategic plan funding provided resources that were otherwise unavailable to cities.

- The Energy Action Plans provide an energy efficiency road map for each Participating Municipality.

Successes

- Implementer completed municipal energy action plans (EAP) for all Participating Municipalities. Each of the seven EAPs was adopted by the Participating Municipality. The goal of an Energy Action Plan is to provide a roadmap for the Participating Municipalities to guide them in the implementation of actions and policies to achieve significant energy savings, cost reduction, and energy planning goals. An Energy Action Plan serves the respective local government with a prioritized and quantified guide for ongoing or future energy efficiency actions. Because each Participating Municipality is unique in its demographic make-up, political history and leadership, and financial position, each EAP was fully customized. To the extent possible, the EAP embeds local conditions, values, and unique circumstances that lend themselves to

efficiency opportunities. The Energy Action Plans focus primarily on municipal operations.

- Personal interviews were key to the Green for Life process. Interviews and multiple meetings with staff of Participating Municipalities:
    - Made it possible to identify key stakeholders in the jurisdiction.
    - Provided informal, and often confidential, background information on city policies and politics.
    - Identified those individuals who would be interested in the process, along with those who would perceive of the process as an extra burden in an already heavy work schedule.

- Building relationships was essential to overcome the inevitable interruptions and delays in the process.

- The program was designed to integrate long-term energy efficiency and climate action planning for our local governments with other elements of the Strategic Plan. We chose a strategy to bring together municipal energy efficiency tasks including benchmarking, commissioning/retro-commissioning, a utility management system, and energy action planning with sustainability programs -- green building and beyond Title 24 tasks as well as greenhouse gas inventories and climate action plans. These tasks were unified as a green government initiative with the Green for Life brand.

Challenges
• There were no significant challenges with the development of the EAPs.

4.3.3   City of El Segundo – Phase 1

Local Government Partnership: South Bay Partnership

Project Title: Develop Municipal Energy Action Plan

Project Purpose: The purpose of the Energy Action Plan (EAP) is to set the Implementer on a course that achieves cost effective and impacting energy reductions through 2020. In doing so, the EAP provides city decision-makers with an understanding of where and how energy is used in city operations, establishes an energy consumption baseline, forecasts a business-as-usual scenario to the year 2020, sets an ambitious yet achievable energy reduction target, evaluates and identifies feasible and cost effective reduction strategies, and provides means for implementation with suggested timelines for each strategy.

Project Scope and Components: The Implementer will develop the energy action plan using the energy consumption data and analysis from both the benchmarking analysis and the utility program manager software program. The energy action plan will also include goals specifying reductions in energy consumption, energy demand, and greenhouse gas emissions that will result from implementing energy efficiency programs and policies.

In addition to the EAP, the Implementer is developing a Climate Action Plan of which the EAP will be a major component. Since electricity consumption is the largest source of municipal greenhouse gas emissions, the strategies in the report are intended to be incorporated into the final Climate Action Plan, providing a robust approach to reducing electricity consumption.

> **Deliverables:**

1. Report on status of Implementer or Subcontractor to support the Task
2. Assessment and planning report for developing the energy action plan
3. Report on total energy consumption
4. Report on stakeholder input
5. Develop first draft of the energy action plan
6. Final energy action plan
7. Report on promoting the recommendations in the energy action plan
8. Monthly status report

Date Approved (Advice Letter (NTP)): March 2011 (April 2011)

Date Completed (est.): December 2012   **Date Completed (actual):** December 2014

Estimated Cost: $75,000   **Final Program Cost:** $454,153 (486,500 Budget)

Local Match Contribution: $0

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

Program Budget Unspent: $32,347

Best Practices
• The following are best practices of the Energy Action Plan: o Develop a well-defined focus - Reducing the City's time and cost in pursuit of achieving energy goals is crucial. Cost-effective approaches outlined in the

EAP were considered and developed that would mitigate any waste in resources. In doing so, the EAP focused on feasible energy reduction initiatives that would yield the most cost effective savings. The City also prioritized projects based on those that would yield the City the most benefit in terms of environmental comfort and return on investment.

o Created a collaborative environment - Collaborating with partners such as SCE through the Energy Leader Partnership was key to the success of the development of the EAP. The team was able to gather data necessary to assess the City's energy usage, coordinate efforts to identify projects, and start the development of an implementation plan. The City will need to continue working with partners to identify energy efficiency projects and to implement projects that are already in the pipeline (e.g., retrofits, pumps, street lights). Tying in potential energy savings projects led to a comprehensive EAP that centralizes all efforts by the City to create a proper roadmap to reach its energy goals. The City recognizes the emergence of energy conservation, renewable energy production, and climate change as critical issues related to long-term sustainable development. As an advocate of sustainable practices and energy efficiency, the City of Norwalk is committed to leading the local community by curbing its energy usage and greenhouse gas emissions across their municipal portfolio of operations.

Lessons Learned

- The following are lessons learned through the development of the Energy Action Plan:

  o Building Capacity - Increasing the baseline energy knowledge of staff is critical to the success of developing an effective EAP. Staff targeted to participate in the development of the EAP should have some understanding of the purposes of an EAP. The Local Government Commission, Statewide Energy Efficiency Collaborative, and ICLEI all have resources that can help staff gain a firm understanding of action planning. Reviewing EAPs from other local governments are also a valuable resource for learning energy management strategies. All relevant stakeholders should participate from the beginning of the process to have appropriate context and understanding of the objectives.

  o The following are a few resources the City used in developing the EAP:

    ▪ Local Government Commission - The Local Government Commission (LGC) is a nonprofit organization fostering innovation in environmental sustainability, economic prosperity and social equity. The LGC is helping to transform communities through inspiration, practical assistance and a network of visionary local elected officials and other community leaders. Since 1980 LGC has been a pioneer cultivating innovative local approaches to improving communities including promoting clean energy and waste reduction. In 1991, LGC developed the Ahwahnee Principles for Resource-Efficient Communities, which helped pave the way for the smart growth movement and has since worked to build awareness about the impact land use decisions have

on transportation, natural resources, public health, climate change and fiscal strength. Their website is full of peer resources that assisted in the development of the EAP.

- ICLEI - ICLEI-Local Governments for Sustainability is the world's leading network of over 1,000 cities, towns and metropolises committed to building a sustainable future. By helping our Members to make their cities and regions sustainable, low-carbon, resilient, ecomobile, biodiverse, resource-efficient and productive, healthy and happy, with a green economy and smart infrastructure, we impact over 20% of the world's urban population.

- California Energy Commission - The California Energy Commission is the state's primary energy policy and planning agency. Established by the Legislature in 1974 and located in Sacramento, seven core responsibilities guide the Energy Commission as it sets California energy policy:

    - Forecasting future energy needs;

    - Promoting energy efficiency and conservation by setting the state's appliance and building energy efficiency standards;

    - Supporting energy research that advances energy science and technology through research, development and demonstration projects;

    - Developing renewable energy resources;

    - Advancing alternative and renewable transportation fuels and technologies;

    - Certifying thermal power plants 50 megawatts and larger;

    - Planning for and directing state response to energy emergencies.

- Institute for Local Governments - The Institute for Local Government promotes good government at the local level with practical, impartial and easy-to-use resources for California communities.

- Including other energy sources - The EAP currently focuses on energy-saving techniques for electricity only. Analyzing additional measures focused on water and gas, for example, would contribute to producing a more comprehensive Energy Action Plan, resulting in additional energy-saving and cost-reducing opportunities for the City.

Knowledge Transferred

- Implementer has a basis for using the Energy Action Plan implementation schedule and target goal setting to aggressively pursue energy efficiency upgrades outlined in the plan.

Next Steps
• Implementer staff is reviewing all energy efficiency projects identified in the energy action plan and preparing a timeline for implementation.

Benefit to the State
• Local governments integrating energy efficiency in their municipal operations align with the state's "loading order" of first addressing energy efficiency as California's top priority resources.

Benefit to Local Government
• The Implementer is using the energy action plan to prioritize projects, and continue to reduce energy usage to meet target goals.
• The Implementer will use the Energy Action Plan as guidance in developing its Capital Improvement Plans.
• The Energy Action Plan sets clear strategic actions designed to reduce Implementer's energy usage by setting out a contextual framework for projects that can be implemented through 2020. It also identifies a strategy for energy efficiency reduction targets, goals, policies and actions to help the Implementer become more energy efficient.
• The Energy Action Plan sets forth a course of action for Staff to coordinate efforts in energy efficiency upgrades and installations in order to meet energy reductions goals. It will help influence appropriate energy consumption practices for all departments and contributes to supporting a more sustainable City.

Successes
• The Implementer developed an Energy Action Plan Sept 2014.
• The City Manager has approved the Energy Action Plan which empowers staff to make decisions using strategies within the plan

Challenges
• No significant challenges were encountered in this task.

4.3.4   City of Goleta – Phase 1

Local Government Partnership: South Santa Barbara Partnership

Project Title: Develop and Adopt Energy Efficiency Action Plan (EEAP) for a Climate Action Plan

Project Purpose: The goal of the EEAP is to provide a comprehensive guiding policy document for all Implementer-related operations as they relate to energy efficiency, specifically electricity and GHG emissions.

Project Scope and Components: Implementer will develop and implement an EEAP as required in Part II of the Implementer-mandated CE-IA-5 Greenhouse Gas Reduction Plan.

>   **Deliverables:**

1.   Report on Status of Consultant or Subcontractor to Support the Task
2.   Assessment and Planning Report for the Development of EEAP
3.   Draft EEAP prepared and submitted to the city Planning Commission for comment and recommendations
4.   Final EEAP submitted and adopted by City Council
5.   Monthly reports of tracked Performance Indicators.

Date Approved (Advice Letter (NTP)): March 2011 (April 2011)

Date Completed (est.): October 2012   **Date Completed (actual):** September 2012

Estimated Cost: $48,048   **Final Program Cost:** $349,290 ($358,370 Budget)

Local Match Contribution: $0

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

Program Budget Unspent: $9,080

Best Practices
• The EEAP identifies actions that the Implementer has or can implement to improve their energy efficiency operations as they relate to energy efficiency, specifically electricity and GHG emissions.
• This EEAP establishes a protocol for tracking energy use, provides an analysis of

past, current, and future, planned energy-related actions, and provides potential additional actions to further reduce the Implementer's electricity and energy consumption.

Lessons Learned

- An Energy Chapter of a Climate Action Plan can provide the framework for future energy efficiency and energy related activities.

Knowledge Transferred

- This document serves as the primary mechanism of conveying best practices and lessons learned from this task. However, the implementer is available to discuss this further with any interested parties.

Next Steps

- The Implementer will develop a neighborhood development floating zone to foster green community development through the 2013-2014 LGP Strategic Plan Pilot Program.

Benefit to the State

- The State will benefit from the municipal EAP/CAP developed through this task by the reduced energy use when the plan is implemented. The EAP/CAP has energy reduction goals and energy reduction strategies that, when implemented, will reduce energy use and GHG emissions. The EAP/CAP is in alignment with California's Long Term Energy Efficiency Strategic Plan, as well as AB32.

Benefit to Local Government

- The EEAP identifies actions that the Implementer has or can implement to improve our energy efficiency operations as they relate to energy efficiency, specifically electricity and GHG emissions.

- This EEAP establishes a protocol for tracking energy use, provides an analysis of past, current, and future, planned energy-related actions, and provides potential additional actions to further reduce the Implementer's electricity and energy consumption.

- Through this EEAP, the Implementer will serve as an example to other public and private entities, and will be a leader in energy efficiency in the community.

- The EEAP will be included in the Climate Action Plan.

Successes

- The EEAP was reviewed by the City of Goleta Planning Commission on August 13, 2012 and a recommendation for approval was made to the City Council.

- The City Council reviewed and approved the EEAP on September 18, 2012.

Challenges

- No significant challenges were encountered in this task.

4.3.5   County of Inyo – Phase 1

Local Government Partnership: Eastern Sierra Partnership

Project Title: Develop and Adopt an Energy Efficiency Chapter for County's Energy Action Plan

Project Purpose: Develop and adopt an energy efficiency chapter for Implementer's energy action plan to encourage energy efficiency and related resource management concepts.

Project Scope and Components: Work with the Eastern Sierra Partnership to develop an energy efficiency chapter for an energy action plan that may be developed for the Implementer (EE-EAP) – refer to SP Task 4.1.1. While SP Task 4.1.1 will develop a template for the EAP for the community, this Task will develop an EE-EAP for facilities owned by Implementer.

Deliverables:

1. Report on Status of Consultant or Subcontractor to Support the Task
2. Assessment and Plan for Development the EE-EAP
3. Draft EE-EAP
4. Report on Stakeholder Input
5. Final EE-EAP
6. Monthly Status reports per Task 4

Best Practices/Lessons Learned from Strategic Plan (Draft)

Date Approved (Advice Letter (NTP)): March 2011 (March 2011)

Date Completed (est.): January 2013   **Date Completed (actual):** October 2012

Estimated Cost: $20,616   **Final Program Cost:** $174,795 ($173,028 Budget)

Local Match Contribution: $0

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

Program Budget Unspent: $0

Best Practices
• Early involvement of "working level" facilities staff is valuable in the overall success of the program.   • Community involvement and shared governance is an important aspect in implementing policy changes.

Lessons Learned
• Because many of Implementer's facilities are leased, the energy billing data was not publically available. The owners needed to provide the CESEAP team with any information or data required in order to fully analyze the Implementer's usage.   • Political climate and garnering support: the consulting team and SCE team members were not residents of the Implementer. They relied heavily on Staff to provide information on what the "local climate" will support; what the Board of Supervisors is looking for, and what would best fit the Implementer as a whole. It was important to keep the Implementer's own goals for the program at the forefront while also finding a way to meet Strategic Plan goals.

Knowledge Transferred
• This document serves as the primary mechanism of conveying best practices and lessons learned from this task. However, the implementer is available to discuss this further with any interested parties.

Next Steps
• The Implementer will develop a revolving energy efficiency fund to provide funding for energy efficiency projects through the 2013-2014 LGP Strategic Plan Pilot Program.

Benefit to the State
• The State will benefit from the municipal EAP/CAP developed through this task by the reduced energy use when the plan is implemented. The EAP/CAP has energy reduction goals and energy reduction strategies that, when implemented, will reduce energy use and GHG emissions. The EAP/CAP is in alignment with California's Long Term Energy Efficiency Strategic Plan, as well as AB32.

Benefit to Local Government
• The Implementer experienced an increase in efficiency awareness among its policymakers and constituents through this process.   o The Energy Efficiency Chapter of the EAP and information is published on the Implementer's website.   • The EAP: o Establishes a long term vision and plan for energy efficiency in the Implementer.   o Identifies the Implementer's reduction goals and milestones.   o Provides policies and procedures the Implementer can implement to assist in reducing energy.   o Offers strategies the Implementer can use to assist in achieving energy reduction goals.   o Serves as an educational tool that can be used by other organizations.   o Records the baseline energy usage (kWh) at Implementer's facilities over 4,500 square feet.   o Displays the highest users (facilities) that the Implementer can target for energy efficiency and the lowest users (facilities) to learn from, and encourage continued success.   o Presents potential funding mechanisms to complete energy efficiency projects.

Successes
• The Implementer completed its Energy Action Plan (EAP). This Energy Action Plan outlines the strategies and programs that will guide energy reduction at County facilities. The EAP will be a cost benefit driven program.   • EAP was approved by the Board of Supervisors with direction to begin implementation.

Challenges
• Data Gathering. Acquiring all of the data needed to complete the EAP, Community EAP, and GHG reports was more difficult than originally anticipated.

4.3.6   City of Moreno Valley – Phase 1

Local Government Partnership: Community Energy Partnership

Project Title: Develop a Municipal Energy Action Plan for the City of Moreno Valley

Project Purpose: Develop and adopt an Energy Action Plan for municipal facilities and properties. The EAP will be used to augment the Implementer's General Plan (incorporated into the Energy Resources discussion).

Project Scope and Components: Implementer will prepare a detailed energy action plan that sets long term efficiency goals for the city.   The plan will reflect the CPUC's Loading Order that places energy efficiency as the State's top energy resource priority, and also dovetail with a community-wide greenhouse gas inventory, described in SP Task 4.1.4. The plan will also include an assessment of the potential for long term sustainable changes in behavior and operations dealing with other key resources like water, clean air, and land use.

   Deliverables:

1. Report on Status of Implementer or Subcontractor to Support the Task
2. Plan for development of the municipal energy action plan
3. Draft municipal energy action plan
4. Final municipal energy action plan presented to City Council; if adopted, copy of resolution; if not adopted, reasons and next steps
5. Monthly reports of tracked Performance Indicators

Date Approved (Advice Letter (NTP)): March 2011 (April 2011)

Date Completed (est.): October 2012   **Date Completed (actual):** June 2013

Estimated Cost: $42,742   **Final Program Cost:** $365,379 ($375,513 Budget)

Local Match Contribution: $0

Project Reimbursed for LG Staff Time: Y / N

Program Budget Unspent: $10,134

Best Practices
• Update codes and zoning guidelines to further implement green building practices. This could include incentives for energy efficient projects.

Lessons Learned
• Joint Study Session with Planning Commission and City Council
• Planning Commission Public Hearing.
• Early Direction from City Council
• Do your research on other local governments
• Networking with our City Partners
• City Departments working together

Knowledge Transferred
• Shared with neighboring cities and Western Riverside Council of Governments in a workshop held in June 2013.

Next Steps
• Continue to implement items in the EAP as funding becomes available.

Benefit to the State
• This EAP demonstrates the Implementer's commitment to achieve energy savings and establish long term energy efficiency goals.
• The EAP's main objective is to reduce the environmental impact and fiscal impact of energy usage in municipal facilities. The Implementer will reduce energy demand and related emissions from Implementer's government operations and facilitate reductions through the goals, measures, and actions identified in this EAP.
• These efforts will sustain the economic, environmental, and physical health of the community and provide the highest quality of life possible.

Benefit to Local Government

- This EAP demonstrates the Implementer's commitment to achieve energy savings and establish long term energy efficiency goals.

- The EAP's main objective is to reduce the environmental impact and fiscal impact of energy usage in municipal facilities. The Implementer will reduce energy demand and related emissions from Implementer's government operations and facilitate reductions through the goals, measures, and actions identified in this EAP.

- These efforts will sustain the economic, environmental, and physical health of the community and provide the highest quality of life possible.

Successes

- The EAP was completed in June 2013.

- The EAP is organized into three sections: an overview of the Implementer's energy use, target reduction goals, and action steps.

Challenges

- The major obstacle for the reach code effort was the concerns of the development community.

  o Although there was an effort to bring forward reach codes that would be the most effective with the least cost to development projects, the decision-makers generally felt that the reach codes were not needed because of upgrades to the energy codes that were due to the be implemented by the State at the time. The decision-makers reviewed but did not approve the reach codes.

4.3.7   City of Oxnard – Phase 1

Local Government Partnership: Ventura Partnership

Project Title: Develop an Energy Action Plan for Municipal Facilities

Project Purpose: Develop and adopt an Energy Action Plan for municipal operations that will identify and prioritize all feasible energy efficiency activities in Implementer-operated facilities. This chapter:

- Recognizes energy efficiency as a high-priority energy resource;

- Makes a strong, long-term commitment to implement cost-effective energy efficiency as a resource;

- Broadly communicates the benefits of and opportunities for energy efficiency;

- Provides for sufficient, timely, and stable program funding to deliver energy efficiency where cost-effective; and

- Modifies policies to align utility Incentives with the delivery of cost-effective energy efficiency.

Project Scope and Components: The Implementer will develop and/or engage a Subcontractor to develop an EAP for Implementer facilities and facilitate its adoption by the Implementer. In developing the EAP, the Implementer will conduct a comprehensive examination of all Implementer-operated facilities and a prioritization of all feasible energy efficiency activities. The Implementer will use ICLEI standards to develop the EAP to ensure that it is both effective for the Implementer and comparable to plans being

Deliverables:

1. RFP for EAP development, as required
2. Documentation of selection of Subcontractor for EAP development
3. Draft EAP Assessment and Planning Report
4. Final EAP Assessment and Planning Report
5. Draft EAP
6. Final EAP
7. Report on EAP Stakeholder Input
8. Resolution adopting EAP by Implementer or documentation of why EAP was not adopted and related alternate plans
9. Draft plan to share EAP documents, best practices and lessons learned with other local governments
10. Final plan to share EAP documents, best practices and lessons learned with other local governments
11. Monthly report of tracked Performance Indicators

Date Approved (Advice Letter (NTP)): March 2011 (May 2011)

Date Completed (est.): April 2012   **Date Completed (actual):** December 2013

Estimated Cost: $75,000   **Final Program Cost:** $275,273 ($275,000 Budget)

Local Match Contribution: $0

Project Reimbursed for LG Staff Time: Ⓨ / N

Program Budget Unspent: $0

Best Practices
• **Hit 'Em on All Fronts.** Community outreach was a critical component to the development of the EAP. The Implementer employed multiple engagement strategies that targeted major stakeholder groups and all sectors of the Implementer's community, including traditionally underrepresented or underserved groups. The stakeholder engagement process included a mix of meetings, workshops, access to a project web site, social media, and other electronic communications to create awareness, involvement and interaction.   • **It Takes a Village.** During the EAP process, the Implementer also leveraged its ability to outreach to the community more efficiently by partnering with community resources such as the Ventura County Regional Energy Alliance (VCREA) and the Inter-Neighborhood Council Forum (INCF). VCREA held a presentation on Residential Energy Awareness and Efficiency at the Implementer's INCF meeting in November, 2012. The INCF was comprised of the chairpersons from the individual neighborhood councils, and VCREA extended an invitation to make presentations at the individual neighborhood councils.

Lessons Learned
• **Show Them the Money**. The public was not necessarily interested in policy as much as they were its financial implications to them. They wanted to know how energy efficiency could impact their monthly budget. Therefore the Implementer may desire to partner with SCE in the future to deliver more targeted, specific information to its residents about cost savings available to them through energy efficiency measures.   • **Show Them the Money Part 2**. The Implementer may also consider expanding outreach to include incentives offered by a variety of investor owned utilities in order to increase participation.   • **The Best Plans Often Go Astray.** Consider contingencies, where possible, when constructing due dates for important milestones.

Knowledge Transferred
• The Implementer shared best practices with other jurisdictions in the region and supported the development of climate and energy action plans as a whole for the Ventura region.   • The importance of involving local organizations and the public in the development process was vital to the success of the program and shared with others.

Next Steps

- Budget constraints make it difficult to implement municipal energy efficiency programs and to sustain long term energy usage best practices. To address this situation we will:

    o Continue to present energy efficiency opportunities to decision-makers.

    o Search for creative or new financing and/or funding.

    o Consider cost-effective and free energy saving measures.

Benefit to the State

- The Implementer was able to develop a long term plan including identifying its top users and develop strategies to implement the savings opportunities that were identified.

- Through the program the Implementer was able to create a baseline for its highest energy consuming facilities so it could have a target approaching in implementing energy efficiency projects.

Benefit to Local Government

- The EAP is a step in developing the Implementer's Climate Action and Adaptation Plan (CAAP) which incorporates the EAP energy baseline information and GHG reduction strategies. The purpose of this Energy Action Plan (EAP) is to establish an overall realistic net energy consumption reduction target and identify and scope programs to achieve the target over time. The EAP builds upon existing energy conservation efforts and identifies energy conservation and production programs consistent with 2030 General Plan goals and policies, utility company programs, and State and Federal legislation and initiatives.

Successes

- The Implementer completed an Energy Action Plan (EAP). The EAP addressed both municipal facilities and the community.

- City Council approved the EAP in June 2013.

Challenges

- There was some difficulty in reviewing peer municipalities to identify the best method to go about this work. Not as many cities had completed an EAP or had their council adopt the plan when the Implementer began work on this task.

- There are huge variances in the type of plan the various cities that were reviewed based on the demographics and support the city had from their council and local

organizations

4.3.8   San Gabriel Valley Council of Governments – Phase 1

Local Government Partnership: San Gabriel Valley Partnership

Participating Municipalities: Alhambra, Arcadia, Baldwin Park, Bradbury, Claremont, Covina, Diamond Bar, El Monte, Glendora, Irwindale, La Canada-Flintridge, La Puente, La Verne, Monrovia, Montebello, Monterey Park, Pomona, Rosemead, San Dimas, San Gabriel, San Marino, Sierra Madre, South El Monte, South Pasadena, Temple City, Walnut and West Covina

Project Title: Develop a Regional Framework for the Energy Efficiency Chapter in the Climate Action Plan (essentially an EAP) and develop one for Each Participating Municipality

Project Purpose: The purpose of this task is to develop a regional framework to be used in the development of the individual energy efficiency chapter in the Climate Action Plan for each Participating Municipality, facilitating the development and achievement of both short-term goals and long-term goals of reductions in energy consumption and greenhouse gas emissions.

Project Scope and Components: Implementer will develop a regional framework to be used in the development of the individual energy efficiency chapter in the climate action plan for each Participating Municipality located in the San Gabriel Valley. The regional framework will contain the content template, and the energy efficiency goal setting methodology for the energy efficiency chapter.   Implementer will also facilitate the development of an energy efficiency chapter for each Participating Municipality. The energy efficiency chapter will include short-term and long-term goals to reduce energy usage and greenhouse gas

Deliverables:

1. Report on steering committee input
2. Report on status of Implementer or Subcontractor to support the Task 3.   Plan for the development of the energy efficiency chapters
3. Plan for the development of the energy efficiency chapters
4. Develop a regional framework for the energy efficiency chapter
5. Technical memo on baseline and long-term forecasts
6. Develop best practices memos
7. Draft energy efficiency chapters.
8. Report on stakeholder input

9. Final energy efficiency chapters and implementation of recommendations

10. Hold regional climate conference

11. Monthly status report

Date Approved (Advice Letter (NTP)): March 2011

Date Completed (est.): Oct 2012   **Date Completed (actual):** Dec 2014

Estimated Cost: $3,207,728   **Final Program Cost:** $2,834,815 ($4,676,228 Budget)

Local Match Contribution: SGVCOG executed Memorandums of Understanding (MOUs) with 25 of the Participating Municipalities, designating the parameters for city staffs to receive reimbursement for their time spent working on the project. Two (2) cities elected to not receive reimbursement through the project so MOUs were not executed with those cities.

Project Reimbursed for LG Staff Time: Ⓨ / N

Program Budget Unspent: $1,841,413

Best Practices
• A Project Steering Committee comprised of staff members from each city convened monthly, providing an opportunity for education, information sharing, project updates, training, and decision-making throughout the planning process.
• The project team worked with staff at each city to develop a customized outreach strategy that would most effective based on the characteristics of each city. Cities utilized a number of outreach methods, including stakeholder interviews, community meetings, web-based personal energy action surveys, mobile workshops held at community events, and staff workshops. While all of these mechanisms helped the project team to obtain stakeholder feedback, the project team found that staff workshops and mobile workshops were especially effective in gaining input.
• Developed the Regional Framework, an overarching document that identified shared regional goals, priorities, and strategies supported the development of each city's Energy Action Plan (EAP). It was developed with the assistance of the Project Steering Committee to provide consistency in the content, format, and organization of each participating city's EAP.
• Developed a model implementation toolkit to assist Participating Municipalities in the implementation, reporting, and monitoring of their EAPs.
• Developed an online regional energy comparison model to visually demonstrate the differences in energy use and GHG emissions between cities.

Lessons Learned

- **Bottom-up approach.** While some tasks were led at the regional level, each Participating Municipality had a unique plan that was developed in coordination with city staff. This was important to maintain staff engagement throughout the process and will be important in the future as each participating city works toward implementing their plan. .

- **Staff expertise and experience.** Due to variations in organizational structure and availability, staff from Participating Municipalities came from a variety of different departments including the following:

    o Public Works

    o Planning/Community Development

    o Administration

    o City Manager's Office

    o Utilities

- **Staff experience and experience.** Technical capabilities from staff in each of these departments often varied, so a different approach was used to garner feedback from each city. In addition, in some departments, due to lack of staff in a department and additional responsibilities of staff, there was a variation in response rates to data requests or the review of the draft policies or projects.

- **Formation of Green Teams.** During the development of the EAP, some cities elected to form a core group of staff from various departments to assist in data collection, task review, and meeting participation. The cities that formed green teams and actively participated in the planning process were generally able to accomplish tasks at a quicker pace than those cities where only one to two people were engaged in the project.

- **Ensure planning allows adequate time to do the job properly.** In the future, energy efficiency planning efforts should ensure that the timeframe to complete the program is adequate given the amount of time necessary to collect data, review draft documents, and schedule hearings with planning commissions or city councils.

- **Energy Action Plan should not be limited to energy efficiency.** While staff recognizes that the plan was not a full Climate Action Plan (CAP), the Energy Action Plans for each city only identified actions for energy efficiency and did not include other areas, including renewables, natural gas, plug-in vehicle planning, among others, that would be related to energy reduction but are not directly related to energy efficiency. These items would not be included in any other section of a CAP, so, even if the entire CAP were completed, these other areas would not be included at all in the Plan.

Knowledge Transferred

- Hosted a regional climate change conference to highlight the program results at the

regional and local level through posters, presentations by staff and the consulting team, and educational materials. Approximately 120 participants attended the conference.

- Developed a model implementation toolkit to assist participating cities in the implementation, reporting, and monitoring of their EAPs.
  - o A training session on the monitoring tool was held for city staffs.

Next Steps

- Through the 2013-2014 LGP Strategic Plan Pilot Program the Implementer will review the EAPs of each of the Participating Municipalities and incorporate applicable energy strategies in a voluntary green building program.

Benefit to the State

- Developing Energy Action Plans and utilizing a utility manager allow cities to meet statewide energy efficiency goals by setting energy efficiency reduction goals for municipal operations and community wide and then tracking progress through the utility manager.

Benefit to Local Government

- Participating Municipalities are now equipped with a comprehensive strategy to identify and remove barriers to reduce energy use in both municipal facilities and throughout their communities.

- Participation in the EAP program has resulted in a stronger relationship and collaborative efforts among the Participating Municipalities in the process, increasing the ability of the Participating Municipalities to successfully implement energy efficiency programs at the regional scale.

Successes

- All 27 EAPs were completed.
  - o 20 EAPs were accepted/received by City Council,
  - o Three (3) were incorporated into other Climate Action Plan or Green Plan documents, and
  - o Four (4) were deemed completed by staff.
- Implementer developed a framework for developing the EAPs as there were 27 EAPs that had to be prepared, and the need for consistency required that protocols and guidelines for data collection, scopes, measures, goals, reporting requirements, and

guidelines for implementing be developed and used in preparing the EAPs.

- Online regional energy comparison model was developed and presented at the conference to assist cities in understanding how their energy use and GHG emissions compares to others in the region.

Challenges
• Consistent staff engagement: In some cases due to staff workload and changes in staff, it became difficult to keep some cities on schedule in the development of the EAPs
• Timeframe for project completion: Due to the magnitude of the project, the relatively short project timeframe made it difficult to receive adequate feedback and adopt the EAPs.
• Data requests: The process for requesting the necessary data from SCE and SoCalGas to begin the GHG inventories took significantly more time to receive than the schedule allowed. Delayed work and delivery of GHG inventories, required a more compressed schedule for EAP development
• Existing concurrent efforts: In some Participating Municipalities there were similar or concurrent sustainability/energy planning efforts already on-going Required greater coordination with city staff and/or their consultants on their GHG inventories, Climate Action Plans, or General Plan updates

4.3.9   County of Santa Barbara – Phase 2

Local Government Partnership: South Santa Barbara Partnership

Project Title: Develop Energy Action Plan

Project Purpose: The Implementer will develop an Energy Action Plan that will establish goals and strategies to assure energy efficiency at the Implementer's facilities. This plan serves as a model to the community of a concrete action plan towards achievement of energy efficiency and greenhouse house goals.

Project Scope and Components: Implementer will develop an energy action plan (EAP) and facilitate its adoption. Implementer will conduct a study of how each Implementer-owned building and other major users of utility resources consume electricity, and investigate and assess methods appropriate for Implementer use to reduce consumption of electric energy resources and to reduce greenhouse gas ("GHG") emissions through EE Measures (EAP

Study). The EAP Study will be the basis for the EAP. The EAP will include specific information on how to meet Implementer's energy use and GHG emission reduction goals.

Deliverables:

1. Draft EAP Study (a study of how each Implementer-owned building and other major users of utility resources consume electricity, and investigate and assess methods appropriate for Implementer use to reduce consumption of electric energy resources and to reduce greenhouse gas ("GHG") emissions through energy efficiency Measures).

2. Final EAP Study

3. EAP Outline

4. Draft EAP

5. Final EAP

6. Report on EAP Stakeholder Input

7. Resolution adopting EAP by Implementer or documentation of why EAP was not adopted and related alternate plans

8. Draft plan to share best practices and lessons learned with other local governments

9. Final plan to share best practices and lessons learned with other local governments

10. Monthly report of tracked Performance Indicators

Date Approved (Advice Letter (NTP)): December 2011 (December 2011)

Date Completed (est.): February 2013   **Date Completed (actual):** January 2013

Estimated Cost: $80,000   **Final Program Cost:** $421,998 ($492,766 Budget)

Local Match Contribution: $0

Project Reimbursed for LG Staff Time: Ⓨ/ N

Program Budget Unspent: $70,768

Best Practices
• The Implementer prepared an Energy Action Plan (EAP) that used the basic structure of an Energy Action Plan (SCE as well as other energy and climate organizations have made public EAP resource documents) and added significantly more detail to reflect the Implementer's size in terms of geography, building number and energy consumption.

Lessons Learned

- Verify and re-verify data. It is without question, the most challenging aspect of the development of an Energy Action Plan – the acquisition and verification of data. This is especially challenging for a local government as large as Implementer's region. The first challenge was data acquisition and ensuring a complete list of buildings, energy uses, equipment, etc. was available. In addition, we had to verify that important building information such as date built, occupancy, operating hours, building plans were available and accurate to ensure data models were completed accurately.

- Moving forward, the Implementer foresees that verification of data which will continue to be a need when updating the Implementer's sustainability plan, climate action plan and energy action plan, will be facilitated by the Utility Manager system which is currently being installed.

- Pay close attention to the financing/funding section of the plan. By including a funding section with financing options listed, the Board of Supervisors would be approving an EAP and the financing options listed. It was perceived that it would obligate the Implementer to implement the financing options listed. As a result, the financing/funding section was updated to offer more broad, instead of specific options. The lesson learned is that counties/cities must tread carefully when writing the financing/funding section.

- Political Challenges. It is essential that the internal project manager have a strong sense of the political context in which the EAP will be reviewed especially because it will need to be approved by the Board of Supervisors for it go into effect.

Knowledge Transferred

- This document serves as the primary mechanism of conveying best practices and lessons learned from this task. However, the implementer is available to discuss this further with any interested parties.

Next Steps

- The County of Santa Barbara pursued the following tasks for the 2013-2014 Strategic Solicitation Pilot:
    - Green Building Code
    - Energy Efficiency Revolving Fund

Benefit to the State

- The State will benefit from the municipal EAP/CAP developed through this task by the reduced energy use when the plan is implemented. The EAP/CAP has energy reduction goals and energy reduction strategies that, when implemented, will reduce

energy use and GHG emissions. The EAP/CAP is in alignment with California's Long Term Energy Efficiency Strategic Plan, as well as AB32.

Benefit to Local Government

- The local government will benefit from the municipal EAP/CAP developed through this task by the reduced energy use and energy costs when the plan is implemented. The EAP/CAP has energy reduction goals and energy reduction strategies that, when implemented, will reduce energy use and GHG emissions.

Successes

- The Implementer prepared an Energy Action Plan (EAP) that used the basic structure of an Energy Action Plan (SCE as well as other energy and climate organizations have made public EAP resource documents) and added significantly more detail to reflect the Implementer's size in terms of geography, building number and energy consumption.

- The EAP was adopted April 2013.

Challenges

- **Data integrity.** Data integrity was the most challenging aspect of the development of the Energy Action Plan. The first challenge was data acquisition and verifying a complete list of buildings, meters, utility accounts, energy uses, equipment, etc. Additional data that needed to be collected included building plans which in many cases were not available especially for older buildings. Another challenge was mapping utility account information, utility meter data and the Implementer's description of its buildings.

- **Ensuring consistency with existing Implementer policies.** It was not expected that the financing/funding section of the EAP would prove to become one of the most problematic elements of the plan and the reason for the delayed approval of the plan. The specific issue was the comment in the plan that On Bill Financing was a viable option to fund the projects in the EAP. What wasn't considered was that On Bill Financing conflicts with Implementer's policy that prohibits financially obligating the Implementer.   It was not understood at the time that by referencing On Bill Financing, or other financing options, obligates the Implementer to implement the financing options listed, including On Bill Financing. As a result, the financing/funding section had to be revised to offer more general or broad financing options, rather than specific options.

4.3.10   City of Simi Valley – Phase 2

Local Government Partnership: Simi Valley Partnership

Project Title: Develop Energy Action Plan

Project Purpose: The purpose of this task is to provide a clear and concrete plan for the Implementer to achieve its energy efficiency and greenhouse gas reduction goals, thereby setting a standard as a leader in energy efficiency for the community.

Project Scope and Components: The Implementer will develop the energy action plan using the energy consumption data and analysis from both the benchmarking analysis and the utility program manager software program. The energy action plan will also include goals specifying reductions in energy consumption, energy demand, and greenhouse gas emissions that will result from implementing energy efficiency programs and policies.

>   **Deliverables:**

1. Report on status of Implementer or Subcontractor to support the Task
2. Assessment and Planning Report for developing the energy action plan
3. Report on total energy consumption
4. Report on stakeholder input
5. Develop first draft of the energy action plan
6. Develop final energy action plan for city council approval. Obtain city council decision on adopting energy action plan.
7. Monthly status report

Date Approved (Advice Letter (NTP)): December 2011 (December 2011)

Date Completed (est.): February 2013   **Date Completed (actual):** November 2012

Estimated Cost: $75,000   **Final Program Cost:** $611,356 ($389,500 Budget)

Local Match Contribution: $0

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

Program Budget Unspent: $0

Best Practices

- The Energy Action Plan (EAP) is designed to be the overarching strategy to identify and implement energy-saving actions for Implementer facilities. Staff will be able to use this EAP to select specific energy efficiency projects that could be implemented in the near and long terms. The EAP includes a compilation of suggested projects, methods to determine cost-effectiveness to achieve maximum energy savings and greenhouse gas emission reductions, and to support measures that are identified in the Green Community Action Plan, and the Climate Action Plan. The energy savings goal of the EAP is aligned with these existing plans.

Lessons Learned

- Implementation will be difficult given the limited availability and capacity of staff. Utilizing external resources or parsing out the project to various people can help alleviate some of these issues.

Knowledge Transferred

- This document serves as the primary mechanism of conveying best practices and lessons learned from this task. However, the implementer is available to discuss this further with any interested parties.

Next Steps

- Staff is implementing energy reduction initiatives including energy audits.

Benefit to the State

- The State will benefit from the municipal EAP/CAP developed through this task by the reduced energy use when the plan is implemented. The EAP/CAP has energy reduction goals and energy reduction strategies that, when implemented, will reduce energy use and GHG emissions. The EAP/CAP is in alignment with California's Long Term Energy Efficiency Strategic Plan, as well as AB32.

Benefit to Local Government

- The Implementer made a long-term commitment to reducing energy usage by identifying and implementing cost effective energy efficiency with a goal to reduce electric energy usage by 20% below 2006 baseline year by 2020.

- The Energy Action Plan (EAP) is designed to be the overarching strategy to identify and implement energy-saving actions for Implementer facilities. Staff will be able to

use this EAP to select specific energy efficiency projects that could be implemented in the near and long terms. The EAP includes a compilation of suggested projects, methods to determine cost-effectiveness to achieve maximum energy savings and greenhouse gas emission reductions, and to support measures that are identified in the Green Community Action Plan, and the Climate Action Plan. The energy savings goal of the EAP is aligned with these existing plans.

Successes

- The Implementer developed an Energy Action Plan that included:

    o Appropriate goals and retrofits for energy conservation and efficiency, and

    o Estimates of greenhouse gas reductions from implementation.

- The Plan was approved by City Council, and budgets for implementation of certain measures have been made.

    o Approval by City Council empowers staff to make decisions using strategies within the plan.

Challenges

- Implementation will be difficult given the limited availability and capacity of staff.

4.3.11   City of South Gate – Phase 1

Local Government Partnership: South Gate Partnership

Project Title: Develop a Municipal Energy Action Plan

Project Purpose: Develop EAP for municipal facilities that will identify energy efficiency opportunities and establish Implementer's long term commitment to cost-effective energy efficiency as a resource. Through the EAP Implementer will recognize energy efficiency as a high priority resource and will make a long-term commitment to implementing cost-effective energy efficiency improvement.

Project Scope and Components: The Implementer will develop an energy action plan ("EAP") and facilitate its adoption by the Implementer. The Implementer will conduct a study of how each Implementer-owned building and other major users of utility resources consume electricity, and investigate and assess methods appropriate for Implementer use to reduce consumption of

electric energy resources and to reduce GHG emissions through energy efficiency Measures ("EAP Study").

Deliverables:

1. Draft EAP Study (a study of how each Implementer-owned building and other major users of utility resources consume electricity, and investigate and assess methods appropriate for Implementer use to reduce consumption of electric energy resources and to reduce GHG emissions through energy efficiency measures)

2. Final EAP Study

3. EAP Outline

4. Draft EAP

5. Final EAP

6. Report on EAP Stakeholder Input

7. Resolution adopting EAP by Implementer or documentation of why EAP was not adopted and related alternate plans

8. Draft plan to share best practices and lessons learned with other local governments

9. Final plan to share best practices and lessons learned with other local governments

10. Monthly report of tracked Performance Indicators

Date Approved (Advice Letter (NTP)): March 2011 (May 2011)

Date Completed (est.): October 2012   **Date Completed (actual):** May 2013

Estimated Cost: $64,000   **Final Program Cost:** $887,332 ($886,000 Budget)

Local Match Contribution: $0

Project Reimbursed for LG Staff Time: Ⓨ / N

Program Budget Unspent: $0

Best Practices
• Developed a well-defined focus: Reducing the Implementer's time and cost in pursuit of achieving energy goals is crucial. Cost-effective approaches outlined in the EAP were considered and developed that would mitigate any waste in resources. In doing so, the EAP focused on feasible energy reduction initiatives that would yield the most cost effective savings.
• Created a collaborative environment: Collaborating with partners such as SCE

through the Energy Leader Partnership was key to the success of the development of the EAP. The team was able to gather data necessary to assess the Implementer's energy usage, coordinate efforts to identify projects, and start the development of an implementation plan. The Implementer will need to continue working with partners to identify energy efficiency projects and to implement projects that are already in the pipeline (e.g., retrofits, pumps, street lights). Tying in potential energy savings projects led to a comprehensive EAP that centralizes all efforts by the Implementer to create a proper roadmap to reach its energy goals.

Lessons Learned

- Build capacity. Increasing the baseline energy knowledge of staff is a critical to the success of developing an effective EAP. Staff targeted to participate in the development of the EAP should have some understanding of the purposes of an EAP. The Local Government Commission, Statewide Energy Efficiency Collaborative, and ICLEI all have resources that can help staff gain a firm understanding of action planning. Reviewing EAPs from other local governments are also a valuable resource for learning energy management strategies. All relevant stakeholders should participate from the beginning of the process to have appropriate context and understanding of the objectives.

- Include other energy sources. The EAP currently focuses on energy-saving techniques for electricity only. Analyzing additional measures focused on such as water and gas, for example, would contribute to producing a more comprehensive Energy Action Plan, resulting in additional energy-saving and cost-reducing opportunities for the Implementer.

- For the EAP, tracking current and historical energy usage is fundamental in managing energy use and costs in the future. The Implementer was not actively tracking energy usage prior to the Strategic Plan Program. The main reason for this was limited capacity in terms of knowledge and finances to track energy usage in a meaningful way.

- The Implementer learned that an effective energy management strategy requires the tracking of energy usage. Data can help to drive decision and policy making. The Implementer will use utility management software to track the energy usage of all municipal facilities in the future.

- The Implementer learned that there is a significant amount of resources made available through public and private entities. Many of these resources are free to access and can support our sustainable community objectives. The Implementer will utilize these resources (some noted in Section 3.4) to education and train staff on best practices and lessons learned from other local and state government agencies.

Knowledge Transferred

- This document serves as the primary mechanism of conveying best practices and

> lessons learned from this task. However, the implementer is available to discuss this further with any interested parties.

Next Steps

- There are no Strategic Plan activities currently planned for the City of South Gate. However, South Gate will continue to pursue Strategic Plan activities through the Gateway Cities Energy Leader Partnership.

Benefit to the State

- The State will benefit from the municipal EAP/CAP developed through this task by the reduced energy use when the plan is implemented. The EAP/CAP has energy reduction goals and energy reduction strategies that, when implemented, will reduce energy use and GHG emissions. The EAP/CAP is in alignment with California's Long Term Energy Efficiency Strategic Plan, as well as AB32.

Benefit to Local Government

- The local government will benefit from the municipal EAP/CAP developed through this task by the reduced energy use when the plan is implemented. The EAP/CAP has energy reduction goals and energy reduction strategies that, when implemented, will reduce energy use, energy costs and GHG emissions.

Successes

- The Implementer completed and approved a municipal Energy Action Plan (EAP). The EAP was developed to establish energy reduction goals, identify target reduction strategies, and develop a plan for implementing the EAP. The expectation of the plan was to provide a focused vision to reach the Implementer's energy goals by discovering and implementing energy-efficiency measures in its municipal buildings, integrating energy efficiency and other demand side management resources into municipal operations.

- The EAP was adopted December 2012.

Challenges

- Implementation of the EAP will be difficult given the limited availability and capacity of staff.

4.3.12   County of Ventura – Phase 1

Local Government Partnership: Ventura Partnership

Project Title: Develop and Adopt Energy Efficiency Action Plan

Project Purpose: Develop an EEAP for consideration and adoption by the County Board of Supervisors

Project Scope and Components: Implementer will develop and implement an EEAP for public facilities. Implementer will assess existing EEAPs including state, utility and Non-Government Organizations (NGO) resources that can serve as templates for the county's EEAP. Based on this assessment, Implementer will prepare a plan for developing the EEAP that includes the rationale for the approach selected and a step-by-step process for completing this task. Implementer will prepare a draft EEAP for public facilities under control of the County of Ventura. During this development effort, Implementer will solicit guidance and input from industry experts, community leaders and other interested stakeholders. The final draft and final EEAP will follow.

> **Deliverables:**

1. Report on Status of Consultant or Subcontractor to Support the Task
2. Assessment and Planning Report for the Development of EEAP
3. Draft EEAP prepared and submitted to the CPM and other stakeholders for review and comment
4. Final EEAP submitted and adopted by county Board of Supervisors; if adopted, provide written EEAP and evidence it was adopted by the County Board of Supervisors and effective date; if not adopted; provide reasons and alternative plans.
5. Monthly reports of tracked Performance Indicators.

Date Approved (Advice Letter (NTP)): March 2011 (May 2011)

Date Completed (est.): Oct 2012   **Date Completed (actual):** Oct 2013

Estimated Cost: $182,000   **Final Program Cost:** $1,001,068 ($1,000,000 Budget)

Local Match Contribution: $0

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

Program Budget Unspent: $0

Best Practices
• Make everyone involved aware that this is a living document so that you can change and make improvements on an annual basis.   • Contact surrounding local governments to learn what their goals, timelines and achievements are so that you can set your EAP to be wrapped up into a bigger report or partner for future projects and funding.

Lessons Learned

• The Implementer looked to similar plans of peer Municipalities, e.g., the CAPs of Alameda County, City of Palmdale and County of San Luis Obispo, for guidance. The Implementer also accessed the following resources to assist in the development of the EAP:
 	
     o The Statewide Energy Efficiency Collaborative (SEEC)
 	
     o ICLEI-Local Governments for Sustainability
 	
     o Institute for Local Government-California Climate Action Network (CCAN)
 	
     o Local Government Commission
 	
     o The Climate Registry
 	
     o California's Long-Term Energy Efficiency Strategic Plan
 	
     o AB 32 and its Scoping Plan
 	
     o The California Energy Commission's Energy Aware Planning Guide
 	
 All these resources helped with the completion and implementation to the task by allowing us to present an EAP with the accurate information from Local and State agencies and feedback from other local governments and networks.
 	
 • Engaging employing in sustainability. The county developed a multi-pronged approach to engaging employees in sustainability. The approach uses a sustainability website, a video and a web-based engagement tool. Engaging employees and actual execution of programs is more art than science, and it is important employees are on-board, as they will be the first to launch the programs in the EAP.

Knowledge Transferred
• Keeps constituents aware of what is going on in municipal activities and all efforts county decision makers are doing to be energy efficient.

Next Steps
• Regular annual analysis of usage focused on identifying high usage facilities, which hadn't been done before. • List of potential projects that will produce high EE improvements.

Benefit to the State
• The State will benefit from the municipal EAP/CAP developed through this task by the reduced energy use when the plan is implemented. The EAP/CAP has energy reduction goals and energy reduction strategies that, when implemented, will reduce energy use and GHG emissions. The EAP/CAP is in alignment with California's Long Term Energy Efficiency Strategic Plan, as well as AB32. • Awareness of local activities and future plans on energy efficiency.

Benefit to Local Government

• The Implementer will be able to better identify and target high usage facilities for energy efficiency improvements.
 	
• Enhanced awareness of the Implementer's commitment to energy efficiency.
 	
• This EEAP addresses energy consumption (and associated greenhouse gas (GHG) emissions) by the Implementer's government operations, and, more specifically, its buildings. This EEAP was prepared as a component of the Implementer's larger Climate Action Plan. Through the EAP the Implementer strives to:
 	
   o Reduce the energy intensity in County owned facilities through the identification and implementation of energy efficiency projects.
 	
   o Ensure that projects whose primary purpose may not be energy savings, such as upgrades to heating and ventilation systems, electrical or water fixtures consider reducing energy use and maximizing operational efficiency during the design phase.
 	
   o Exceed Title 24 requirements by 15% in all new construction and major renovation.
 	
   o Reduce the use of electricity, natural gas, and water through targeted energy projects, management of building operating schedules, use of peak shifting operating strategies, management of utility rate structures, and installation of low flow water fixtures.
 	
   o Minimize projects costs by taking advantage of available utility incentives.
 	
   o Pursue United States Green Building Council's (USGBC) Leadership in Energy and Environmental Design (LEED) Green Building certification and/or the Environmental Protection Agency's ENERGY STAR certification for appropriate buildings.

> o   Influence employee behavioral changes through an education and outreach program.

Successes
• Developed and adopted an Energy Efficiency Action Plan for the Climate Action Plan.
• Conducted an "Energy Management and Modernization Plan (Scoping Study)" for a large Medical Center and a local Hospital to identify best practices in health care energy efficiency. The findings from this study were incorporated into the EEAP.
• The Implementer developed an Energy Efficiency Action Plan (EEAP) that was adopted by the Implementer's Board of Supervisors.

Challenges
• No significant challenges were encountered in this task.

4.3.13   City of Visalia – Phase 2

Local Government Partnership: San Joaquin Valley Partnership

Project Title: Visalia Municipal Energy Action Plan (EAP)

Project Purpose: The completed EAP will require the local government to develop in-house capabilities to systematically achieve cost-effective energy efficiency measures throughout the City's facilities, as well as integrate energy efficiency practices into normal City operations. It will also provide a reference document to help educate local government officials and make EE a normal part of the City's legislative and policy-making processes.

Project Scope and Components: The Implementer will develop the energy action plan using the energy consumption data and analysis from the comprehensive energy audits of Implementer's facilities. The comprehensive energy audits are not funded by this Program. The energy action plan will also include goals specifying reductions in energy consumption, energy demand, and greenhouse gas emissions that result from implementing energy efficiency programs and policies.

   Deliverables:

1. Report on status of Implementer or Subcontractor to support the Task

2. Plan for the developing the energy action plan

3. Report on stakeholder input

4. Develop first draft of the energy action plan

5. Final energy action plan

6. Report on promoting the recommendations in the energy action plan

7. Monthly status report

Date Approved (Advice Letter (NTP)): December 2011 (December 2011)

Date Completed (est.): September 2012   **Date Completed (actual):** September 2013

Estimated Cost: $82,100   **Final Program Cost:** $77,960 (82,100 Budget)

Local Match Contribution: $0

Project Reimbursed for LG Staff Time: Y / N

Program Budget Unspent: $0

Best Practices
• The City is implementing the Energy Efficiency Measures identified in the EAP through a $500,000 California Energy Commission loan.
• The City has organized a "BATTLE OF THE BUILDINGS" competition to encourage employees to make small changes that will have a big impact (when combined) on the amount of electricity the City uses at municipal facilities. The competition will be the month of October 2013 to correlate with national Energy Awareness month. It is a "biggest loser" style challenge in that the participants are judged based on the percent of electricity they reduce from the previous year.
• The "best practice" that developed through the Implementer's Municipal Energy Action Plan project is that local government agencies should begin planning for implementation funding while in the final stages of the energy action plan preparation to allow for a seamless transition into implementation upon completion of the planning phase.

Lessons Learned
• The main lesson learned through the development of the Implementer's Municipal Energy Action Plan is that is it beneficial to involve key stakeholders when developing an energy action plan, and that various departments have a variety of needs based on how they utilize their individual facilities, and those needs should be factored into

energy retrofit decisions.

Knowledge Transferred

- The Natural Resource Conservation Division (NRCD) will communicate to the community through the City's website the City's energy efficiency efforts and results.

Next Steps

- The Natural Resource Conservation Division (NRCD) of the City has prepared an outline which will be used as the framework to develop the City's Environmentally Preferable Purchasing Policy (EPPP). The EPPP will include recommendations for purchasing energy efficient equipment.

- The Implementer will dedicate Staff time to pursue funding (e.g., grant writing) and oversee implementation of the EAP to ensure maximum leverage of local, utility, state, and federal programs. Potential funding sources include On-Bill Financing, CEC financing, and the Implementer's Conservation Fund, which may fund any conservation project that results in a utility cost savings including electricity, natural gas, and water conservation measures.

Benefit to the State

- Through implementation of projects identified in the EAP which have reduced the Implementer's and State's energy use by 710,028 kWh and 3,568 Therms of natural gas each year.

- Reduction in energy use results in less generation of GHGs.

- Implementer's modeling of energy efficiency retrofits and knowledge transfer results in additional energy reductions for residents and businesses in the community.

Benefit to Local Government

- The Implementer has a concrete energy efficiency plan from which it can achieve energy efficiency improvements. The secured funding through a CEC loan and is proceeding to implement a number of measures from the EAP.

- This plan provides a framework for decision making regarding efficiency measures that result in the reduction of energy consumption and associated greenhouse gases (GHGs).

- Staff is currently implementing the EAP.

Successes
• The Implementer developed a Municipal Energy Action Plan (EAP) as a result of this project, and is currently implementing the EAP. • The Energy Action Plan was adopted by City Council in September 2013. • The Implementer is implementing the Energy Efficiency Measures identified in the EAP through a $500,000 California Energy Commission loan.

Challenges
• There were not any obstacles in the development of the Implementer's Municipal Energy Action Plan.

4.3.14   Western Riverside Council of Governments – Phase 2

Local Government Partnership: Western Riverside Energy Leader Partnership

Participating Municipalities: Calimesa, Canyon Lake, Hemet, Lake Elsinore, Menifee, Murrieta, Norco, Perris, San Jacinto, Temecula, and Wildomar

Project Title: Develop and Adopt an Energy Action Plan (EAP) for Participating Municipalities' Municipal Operations

Project Purpose: Develop an EAP for each Participating Municipality that will establish goals specifying reductions in energy consumption, energy demand, and greenhouse gas emissions that result from implementing energy efficiency programs and policies for participating municipalities' operations.

Project Scope and Components: Implementer will develop and present for adoption an EAP focusing on improving energy efficiency of Participating Municipalities' facilities and operations. Using a Consultant, Implementer will develop an EAP document that will be customized with data from the Participating Municipalities and presented for adoption by the Participating Municipalities.

> **Deliverables:**

1. Report on Status of Consultant or Subcontractor to Support the Task
2. Assessment and Planning Report for the Development, Adoption, and Implementation of an EAP

3. Draft EAP prepared and submitted to the city Planning Commission for comment and recommendations

4. Final EAP submitted and adopted by Participating Municipalities; documentation that EAP and recommendation are adopted, or, if not adopted, alternate plans

5. Monthly reports of tracked Performance Indicators.

Date Approved (Advice Letter (NTP)): December 2011 (December 2011)

Date Completed (est.): Oct 2012 **Date Completed (actual):** Jun 2014

Estimated Cost: $363,362 **Final Program Cost:** $1,173,196 ($2,061,593 Budget)

Local Match Contribution: $0

Project Reimbursed for LG Staff Time: Y / N

Program Budget Unspent: $888,397

Best Practices
• Implementer developed a template for the EAP which was then used for each of the eleven EAPs.
• Each Participating Municipality's EAP contains energy and GHG emissions information. Energy efficiency policies were developed for each city's municipal operations to help reduce energy usage and help the jurisdiction to meet statewide goals.

Lessons Learned
• SCE's Energy Leader Partnership model hold jurisdictions overly accountable for program and policy goals identified in the jurisdictional EAPs to move up the SCE ELP model. When designing an Energy Action Plan, define "implemented" policy as completion of a *portion* of the projects identified.

Knowledge Transferred
• Information attained from the involvement in an Energy Action Plan (EAP) will aid participating municipalities with knowledge on how to reduce their energy consumption and greenhouse gas emissions.
• This information can be provided to neighboring municipalities are interested in implementing an EAP to aid them with their energy goals.

Next Steps

- Participating Municipalities have begun implemented many of these measures; namely lighting retrofits, inefficient HVAC replacements, well and pump projects retrofits, and window tinting additions.

Benefit to the State

- The State will benefit from the municipal EAP/CAP developed through this task by the reduced energy use when the plan is implemented. The EAP/CAP has energy reduction goals and energy reduction strategies that, when implemented, will reduce energy use and GHG emissions. The EAP/CAP is in alignment with California's Long Term Energy Efficiency Strategic Plan, as well as AB 32.

- Implemented measure will aid with the reduction of greenhouse gas emissions (GHG's) such as AB 32.

Benefit to Local Government

- City awareness of municipal energy consumption.

- Created an energy roadmap for 2020 and 2035 that will assist each participating jurisdiction to meet and exceed statewide energy goals.

- Many jurisdictions are also participating in the Implementer's sub-regional CAP program.

- Clearly described strategies, actions, and cost information

- Participating Municipalities have a framework for staff to bring new ideas regarding EE forward to council, board, etc.

Successes

- An EAP was developed for each Participating Municipalities' municipal operations. Each Participating Municipality's EAP contains energy and GHG emissions information. Energy efficiency policies were developed for each city's municipal operations to help reduce energy usage and help the jurisdiction to meet statewide goals.

- Implementer developed a template for the EAP which was then used for each of the eleven EAPs.

- Implementer then integrated these EAPs into an Implementer's Regional. The Implementer's Regional CAP, of which the EAPs were integrated into the electricity

chapter, was approved by the Implementer's Executive Committee in June 2014.

Challenges

• SCE's Energy Leader Partnership model hold jurisdictions overly accountable for program and policy goals identified in the jurisdictional EAPs to move up the SCE ELP model.
 	
    o City's that identify too many quantifiable measures would be forced to implement all of those projects to achieve goals before Energy Leader Partnership progression.
 	
        ▪ This contradicts the Energy Leader Partnership EAP Checklist used to determine if a Local Government's EAP meets the criteria for the various ELP Tier Levels.

4.4 Strategic Plan Task 3.2.2 – Local Government Building Standard

Adopt a policy to require LEED, Energy Star Ratings, or other program standard for municipal facilities.

4.4.1 City of El Segundo – Phase 1

Local Government Partnership: South Bay Partnership

Project Title: Develop and Adopt LEED Certification Policy

Project Purpose: Adopt a LEED certification policy for municipal facilities and lead by example by showing how LEED-certified buildings reduce energy, improve the comfort of people working in the building and have less impact in using our earth's resources.

Project Scope and Components: Implementer will develop a LEED certification policy for municipal buildings. The policy will include description of building characteristics, which would be covered by the policy. The policy will also outline the financial impact to implement the LEED policy, and describe how the LEED policy will be implemented.

NOTE: The Implementer cancelled this task because as the proposal to the solicitation was being prepared the Implementer had adopted a LEED policy, unbeknownst to the proposal writing/contracting team.

Deliverables:

1. Report on status of Implementer or Subcontractor to support the Task
2. Draft LEED certification policy
3. Final LEED certification policy
4. Monthly status report

Date Approved (Advice Letter (NTP)): March 2011 (April 2011)

Date Completed (est.): November 2011   **Date Completed (actual):** Task Terminated in 2011 when Implementer realized that a similar LEED certification policy was adopted by the Implementer during the final contracting stage.

Estimated Cost: $12,000   **Final Program Cost:** $0

Local Match Contribution: $0

Project Reimbursed for LG Staff Time: Ⓨ / N

Program Budget Unspent: $0

Best Practices
• None. The task was terminated in 2011 when Implementer realized that a similar LEED certification policy was adopted by the Implementer during the final contracting stage.

Lessons Learned
• None. The task was terminated in 2011 when Implementer realized that a similar LEED certification policy was adopted by the City during the final contracting stage.

Knowledge Transferred
• None. The task was terminated in 2011 when Implementer realized that a similar LEED certification policy was adopted by the Implementer during the final contracting stage.

Next Steps
• None.

Benefit to the State
• None. The task was terminated in 2011 when Implementer realized that a similar LEED certification policy was adopted by the Implementer during the final contracting stage.

Benefit to Local Government
• None. The task was terminated in 2011 when Implementer realized that a similar LEED certification policy was adopted by the Implementer during the final contracting stage.

Successes
• None. The task was terminated in 2011 when Implementer realized that a similar LEED certification policy was adopted by the City during the final contracting stage.

Challenges
• None. The task was terminated in 2011 when Implementer realized that a similar LEED certification policy was adopted by the Implementer during the final contracting stage.

4.4.2   City of Goleta – Phase 1

Local Government Partnership: South Santa Barbara Partnership

Project Title: Adopt a Policy to Require LEED, Energy Star Ratings, or Other Program Standards for Municipal Facilities

Project Purpose: Develop and adopt a policy that requires Implementer's facilities to meet LEED, Energy Star, or other Program standards. Such a program will utilize implementation of guidelines that may include a rating system to assess and measure how efficient a building is, thus providing a tool to measure performance.

Project Scope and Components: Implementer will adopt a policy to require municipal facilities to be LEED certified, use the ENERGY STAR® building performance rating system, or other Program standards to assess and measure facility/building energy performance.

Deliverables:

1. Report on Status of hiring Consultant or Subcontractor to Support the Task

2. Assessment and Planning Report for the Development of a Policy for LEED, Energy Star or other program standard (policy) for Municipal Facilities

3. Draft Policy for municipal facilities to the City Council Subcommittee(s) for a recommendation to the full City of Goleta's City Council

4. Proposed Final Policy completed

5. Policy submitted to City Council for adoption; if adopted, provide written policy and evidence the policy was adopted by the local government; effective date of plan; if rejected, reasons for rejection and alternative plans.

6. Implement program standard for municipal facilities.

7. Monthly reports of tracked Performance Indicators

Date Approved (Advice Letter (NTP)): March 2011 (April 2011)

Date Completed (est.): July 2012   **Date Completed (actual):** October 2012

Estimated Cost: $6,062   **Final Program Cost:** $349,290 ($358,370 Budget)

Local Match Contribution: $0

Project Reimbursed for LG Staff Time: Ⓨ / N

Program Budget Unspent: $9,080

Best Practices
• A Green Building Policy that focuses on LEED certification provides an internationally standardized method for evaluation and certification.

Lessons Learned
• Instead of a blanket Green Building Policy, focusing the policy on buildings of a certain size will limit the potential economic and administrative impact of the policy.

Knowledge Transferred

- This document serves as the primary mechanism of conveying best practices and lessons learned from this task. However, the implementer is available to discuss this further with any interested parties.

Next Steps

- The Implementer will develop a neighborhood development floating zone to foster green community development through the 2013-2014 LGP Strategic Plan Pilot Program.

Benefit to the State

- The State will benefit from this task because a green building/energy efficiency policy for municipal facilities will increase the energy efficiency of the Participating Municipality's facilities resulting in reduced energy use and GHG emissions.

Benefit to Local Government

- The Local Government will benefit from this task because a green building/energy efficiency policy for municipal facilities will increase the energy efficiency of the Participating Municipality's facilities resulting in reduced energy use and GHG emissions. This will result in lower energy use and cheaper energy bills.

Successes

- A Green Building Policy requiring new municipal facilities over a certain size to be LEED certified at the Silver level approved by City Council in October 2012.

Challenges

- No significant challenges were encountered in this task.

4.4.3 County of Inyo – Phase 1

Local Government Partnership: Eastern Sierra Partnership

Project Title: Adopt a Policy to Require LEED, ENERGY STAR Ratings, or Other Program Standard for Implementer's Facilities

Project Purpose: Adopt a policy to require LEED, ENERGY STAR ratings, or other program standard for Implementer's facilities to increase energy efficiency in government facilities.

Project Scope and Components: Develop an energy policy requiring standards for Implementer's facilities that incorporates LEED standards and ENERGY STAR ratings (Advanced Program Code/Standard). The policy will be presented to the Board of Supervisors for consideration. These programs will be developed through research regarding similar programs elsewhere, and outreach to the Implementer's partners and other local, regional, State, and federal agencies.

> **Deliverables:**

1. Report on Status of Consultant or Subcontractor to Support the Task
2. Assessment and Planning Report for the Development of a Policy for LEED, ENERGY STAR or other program standard (Advanced Program Code/Standard) for Implementer's Facilities
3. Draft Advanced Program Code/Standard
4. Report on Stakeholder Input
5. Final Advanced Program Code/Standard
6. Submit Advanced Program Code/Standard to Board of Supervisors for consideration
7. Final Report on the Process that is distributed to SCE, the City of Bishop, LTC, and GBUAPCD
8. Monthly Status reports

Date Approved (Advice Letter (NTP)): March 2011 (March 2011)

Date Completed (est.): February 2013   **Date Completed (actual):** November 2012

Estimated Cost: $7,316   **Final Program Cost:** $174,795 ($173,028 Budget)

Local Match Contribution: $0

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

Program Budget Unspent: $0

Best Practices

- Early involvement of "working level" facilities staff is valuable in the overall success of the program.

- Community involvement and shared governance is an important aspect in implementing policy changes

Lessons Learned

- Because many of Implementer's facilities are leased, energy data is not publicly available. The owners needed to provide the CESEAP team with any information or data required in order to fully analyze the Implementer's usage.

- Political climate and garnering support: the consulting team and SCE team members were not residents of the Implementer. They relied heavily on Staff to provide information on what the "local climate" will support; what the Board of Supervisors is looking for, and what would best fit the Implementer as a whole. It was important to keep the Implementer's own goals for the program at the forefront while also finding a way to meet Strategic Plan goals.

Knowledge Transferred

- This document serves as the primary mechanism of conveying best practices and lessons learned from this task. However, the implementer is available to discuss this further with any interested parties.

Next Steps

- The Implementer will develop a revolving energy efficiency fund to provide funding for energy efficiency projects through the 2013-2014 LGP Strategic Plan Pilot Program.

Benefit to the State

- The State will benefit from this task because a green building/energy efficiency policy for municipal facilities will increase the energy efficiency of the Participating Municipality's facilities resulting in reduced energy use and GHG emissions.

Benefit to Local Government

- The Implementer's new construction and renovation projects will focus on higher energy efficiency.

- Raise public awareness of the benefits of Green Building.
  - Implementer will post information on website for the public to view.

Successes
• The Advanced Program Code adopted by the Implementer will ensure that new and existing Implementer-owned buildings function in a manner that promotes energy efficiency, and optimizes equipment operation, which will lead to cost savings. • Energy Star Portfolio Manager will be used to rate and rank its facilities by energy use patterns and use the information to develop, direct and update the Advanced Program Code policy. For existing facilities CALGreen will be used as facilities are updated.

Challenges
• The advanced program code changed throughout the drafting process. The assessment and planning report looked at multiple building code options. The Implementer ultimately created a policy that combined multiple considerations and issues.

4.5 Strategic Plan Task 3.2.3 – Local Government Revolving Energy Efficiency Fund

Develop policy for a revolving energy efficiency fund for City/County facilities.

4.5.1 City of Moreno Valley – Phase 1

Local Government Partnership: Community Energy Partnership

Project Title: Develop a Municipal Revolving Fund for Energy Efficiency Projects

Project Purpose: Develop and adopt an energy efficiency revolving loan fund for municipal energy efficiency projects. This fund will overcome the barrier of financing energy efficiency projects by providing a sustainable means of capturing a portion of the resulting savings from efficiency gains in its municipal facilities, then reinvesting these funds for long-term benefit.

Project Scope and Components: Through the Program, Implementer will establish guidelines for administration and use of an energy efficiency revolving loan fund and implement the revolving fund program as a means of financing a continuing stream of energy savings.   As

energy efficiency projects are completed at Implementer's facilities, Implementer will use funds generated expected bill reductions to continually sustain revolving loan fund.

Deliverables:

1. Implementer or Subcontractor Agreement for Resource to Support the Task
2. Plan for Energy Efficiency Fund
3. Policies and Procedures for Revolving Fund
4. Submit Revolving Fund Policy to City Council for adoption; if adopted, provide evidence it was adopted by the local government and effective date; if not adopted; provide reasons and alternative plans
5. Report on the Implementation of the Fund
6. Monthly reports of tracked Performance Indicators

Date Approved (Advice Letter (NTP)): March 2011 (April 2011)

Date Completed (est.): October 2012   **Date Completed (actual):** September 2013

Estimated Cost: $26,051   **Final Program Cost:** $365,379 ($375,513 Budget)

Local Match Contribution: $0

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

Program Budget Unspent: $10,134

Best Practices
• Had funds to start an Energy Efficiency Fund with the energy rebates that we had received from SCE and Implementer's own City Utility.

Lessons Learned
• City Manager and Finance Director were supportive.
• Planning and Facilities worked together to apply for rebates.
• Researched other cities, such as Santa Monica, San Jose, Irvine, Long Beach, and Phoenix Arizona.
• Learned from what other Cities did and we made our own Policy to fit our City.
• Kept energy fund simple, so that it will not take much staff time to administer.

- Went with easy to use easy to apply for and administer. Wanted fund to be used and replenish itself for future use.

- The energy funds may only be used for energy efficient projects and the project must qualify for a rebate though one of the Utilities.

- Established a Committee to allocate funding

Knowledge Transferred

- Shared with neighboring cities and Western Riverside Council of Governments in a workshop held in September 2013.

Next Steps

- The next step of for the Implementer to use the Revolving Fund.

Benefit to the State

- The completion of the policy resulted in establishing a process for funding future energy efficient projects.   This will result in increased energy efficiency among Implementer's buildings and facilities, thereby reducing energy use and GHG emissions.

Benefit to Local Government

- The completion of the policy resulted in establishing a process for funding future energy efficient project.

- The Facilities Department is intending to use this account for future energy efficient project for Implementer's facilities.

- The benefit of having this fund in place is to ensure that monies received by the Implementer related to energy efficiency uses (e.g., rebate monies) are used for future energy efficient projects.

Successes

- Planning staff completed the revolving fund policy that was approved by City Council in June 2013.

- The Energy Efficiency Fund will provide a structured and cost effective approach for funding future cost-effective energy efficiency projects in conjunction with the continuing pursuit of utility rebates and incentives.

- The fund to be self-sustaining based on rebates and incentives received, and from a portion of the energy savings achieved, by energy efficiency projects.

- An account has been setup where rebate money from energy efficient projects is deposited and will be used for additional energy efficiency projects.

Challenges

- There were some initial concerns among some departments with regard to how the policy would be written and structured.

- There were concerns how monies might be prioritized among department.
  - These concerns were addressed through the elements in the policy.

4.5.2 City of Santa Monica – Phase 1

Local Government Partnership: Community Energy Partnership

Project Title: Energy Efficiency Revolving Loan Fund

Project Purpose: Cities have always wrestled with the "split incentive" issue in which operational and maintenance savings are often hijacked by other general fund priorities and rewarded with lower budgets, thus removing any incentive to expend more capital on efficiency improvements. The goal of this task is to establish an Energy Efficiency Revolving Loan Fund that will provide funding for energy efficiency projects that will be replenished as the savings from the project is realized, thereby providing funds for future projects. This fund will be established in such a way that its funding sources will not be hijacked.

Project Scope and Components: The Implementer will develop and implement a plan for the establishment of an energy efficiency revolving loan fund ("EE Loan Fund") that provides an accounting procedure in which capital expended on energy efficiency Measures in the Implementer's facilities is recovered in a designated fund for reinvestment in energy efficiency Measures in municipal facilities.

Deliverables:

1. Draft RFP for consultation services for EE Loan Fund creation and implementation
2. Final RFP for consultation services for EE Loan Fund creation and implementation
3. Bid award announcement for consultation services for EE Loan Fund creation and implementation

4. Draft EE Loan Fund Plan

5. Final EE Loan Fund Plan

6. Draft EE Loan P&P

7. Final EE Loan P&P

8. Resolution establishing EE Loan Fund or documentation of why EE Loan Fund was not established and related alternate plans

9. Draft EE Loan Fund White Paper

10. Final EE Loan Fund White Paper

11. Draft EE Loan Fund Project Report

12. Final EE Loan Fund Project Report

13. Draft Forecast & Recommendation Report

14. Final Forecast & Recommendation Report

15. Meeting minutes from all meetings held with Implementer's finance department as Work under this task

16. Monthly report of tracked Performance Indicators

Date Approved (Advice Letter (NTP)): March 2011 (June 2011)

Date Completed (est.): October 2012   **Date Completed (actual):** October 2013

Estimated Cost: $50,000   **Final Program Cost:** $317,974 ($374,000 Budget)

Local Match Contribution: $0

Project Reimbursed for LG Staff Time: Y / N

Program Budget Unspent: $56,026

Best Practices
• The initial recommendation was a pay-it-forward model that charged 0% outright interest but required the project to make one additional annual payment to the Fund after the principal amount was repaid. This contribution was intended to grow the Fund quickly.
• In the end, the Implementer selected a fixed interest rate instead of the pay-it-forward model. The Implementer decided that a fixed rate was simpler and that it was more appropriate for all projects to pay the same reasonable rate. The rate was set at 9%, which will theoretically double the size of the Fund in eight years.

Lessons Learned

- Early buy-in of the departments that will be involved in implementing and benefitting from the Fund is crucial. The finance and accounting functions are perhaps most critical.

- Funding projects for enterprise departments can present legal and accounting complexities. In the interest of keeping it simple, it may be better initially to exclude enterprise departments from participation until a Fund is able to demonstrate success in working with general fund departments.

- Even the best-conceived plans can be impacted by developments beyond an Implementer's control. In this case, cutbacks in State budget commitments to local governments have placed the Implementer in a difficult budget position and put implementation of the Fund on hold for the time being. The issue is that all utility bill savings need to be used for budget relief at the moment rather than revolving back into the Fund.

Knowledge Transferred

- The Implementer has a model by which rebates from energy projects are deposited into the revolving loan fund.

Next Steps

- Implementer Staff will solicit project proposals to fund from the revolving loan.

Benefit to the State

- The revolving loan fund leverages energy rebates which are funded by ratepayer dollars. By diverting these funds from the Implementer's General Fund, and dedicating them to additional energy projects, the State's investment in energy efficiency will continue to sustain energy efficiency, renewable generation and electric vehicle charging.

Benefit to Local Government

- The Revolving Energy Fund (Fund) will help Implementer's departments make energy efficiency (and also renewable energy) improvements to their facilities. Even though such improvements save money and make good sense financially, the upfront cost can be an obstacle. The Fund was developed to help pay for projects when other sources of funding are not available. Departments can apply for an advance of up to 100% of the project cost, with the energy cost savings used to repay the advance.

- Seed money for the Fund comes from utility rebates and similar incentives the

> Implementer receives. The Fund "revolves" in the sense that the repayments from one project are used to fund another and another. In this way, a relatively small seed can sprout into bigger budget savings for you and for the Implementer as a whole.

Successes
• The Revolving Energy Fund was adopted by City Council in 2013.

Challenges
• The Implementer developed a process with a selection committee and project criteria as well as payback requirements for projects that has created an administrative burden for projects that would benefit from these funds.

4.5.3 Western Riverside Council of Governments – Phase 2

Local Government Partnership: Western Riverside Energy Leader Partnership

Participating Municipalities: Temecula

Project Title: Develop Energy Efficiency Revolving Fund (EERF) for the City of Temecula

Project Purpose: This task will provide a source of funding for future energy efficiency projects, promoting a culture of sustainable energy efficiency, and setting a standard of energy efficiency action for the municipality's facilities.

Project Scope and Components: Implementer will establish guidelines and develop a program for the administration and use of an energy efficiency revolving fund for municipal facilities as a means of financing a continuing stream of energy savings from projects implemented by the City of Temecula.

    Deliverables:

1. Implementer or Subcontractor Agreement for Resource to Support the Task
2. Plan for Energy Efficiency Fund
3. Policies and Procedures for Revolving Fund
4. Submit Revolving Fund Policy to the Participating Municipality for adoption; if adopted, provide evidence it was adopted by the local government and effective date; if not adopted; provide reasons and alternative plans

5. Report on the Implementation of the Fund

6. Monthly reports of tracked Performance Indicators

Date Approved (Advice Letter (NTP)): December 2011 (December 2011)

Date Completed (est.): Jun 2013   **Date Completed (actual):** Dec 2014

Estimated Cost: $80,552   **Final Program Cost:** $1,173,196 ($2,061,593 Budget)

Local Match Contribution: $0

Project Reimbursed for LG Staff Time: Ⓨ / N

Program Budget Unspent: $888,397

Best Practices
• The administrative manual comprised procedures and processes to track, audit, and assess wish list projects, as well as projects in the process and all associated payback and City return on investment.

Lessons Learned
• If seed money can be identified, a revolving fund is a great way to ensure budgets for energy efficiency projects.
• Energy saved from projects, can help to reimburse the fund, ensuring the fund continues to implement projects.

Knowledge Transferred
• Implemented guidelines have assisted the following jurisdiction to use revolving funds to implement projects that are assisting the jurisdiction with energy efficiency programs.
• Such programs will provide the jurisdiction with more leverage to identify other methods of energy savings with the guidelines put in affect.

Next Steps
• The City of Temecula will utilize the EE revolving fund to complete energy efficiency projects that will lower energy use, energy costs, and GHG emissions.

Benefit to the State
• The State will benefit from this task by having buildings and facilities that are operating at optimal energy efficiency, thereby reducing energy use and GHG emissions.
• Implemented measure will aid with the reduction of greenhouse gas emissions (GHG's) such as AB 32.

Benefit to Local Government
• The Temecula Energy Efficiency Asset Management Fund (TEEM), developed by Implementer, is intended to fund energy efficiency and water efficiency projects, supporting ongoing energy and water efficiency improvements by providing funds to fill financing gaps and/or subsidize projects at municipal facilities. TEEM is designed to be self-sustaining as energy and water savings from projects implemented under TEEM reduce costs to the City.
• Temecula has a fund available for qualified energy efficiency projects at the City's facilities and operations.
• Energy savings will be paid back into the revolving fund to finance future energy efficiency projects on an ongoing basis.
• The TEEM policy specified the initial seed funding, the minimum balance of the fund, fund repayments, and fund reinvestment.
• In June 2013, Temecula City Council approved the creation of a special revenue fund for the Temecula Energy Efficiency Asset Management fund (TEEM).

Successes
• An administrative manual for the Energy Efficiency Fund that was developed for the City of Temecula. The administrative manual comprised procedures and processes to track, audit, and assess wish list projects, as well as projects in the process and all associated payback and City return on investment.
• Funding was identified as the implementation and operating budget for the revolving loan fund.
• Temecula's City Council approved the creation of the Temecula Energy Efficiency Asset Management (TEEM) fund in June 2013.

Challenges
• No significant challenges were encountered in this task.

4.6 Strategic Plan Task 3.2.4 – Local Government Commissioning/Retro-Commissioning Policy

Develop commissioning/retro-commissioning policies for municipal facilities.

4.6.1 Coachella Valley Association of Governments – Phase 1

Local Government Partnership: Desert Cities Partnership

Participating Municipalities: Blythe, Cathedral City, Desert Hot Springs, Indian Wells, Palm Springs, Rancho Mirage, and the Agua Caliente Band of Cahuilla Indians

Project Title: Municipal Facility Commissioning and Retro-commissioning Policy

Project Purpose: Develop a Commissioning/Retro-Commissioning Policy for municipal facilities for each Participating Municipality for adoption. The policy will ensure that municipal facilities that undergo commissioning or retro-commissioning are operating at optimal efficiency.

Project Scope and Components: The Implementer will develop a policy framework that describes how building commissioning and retro-commissioning ("RCx") practices will be integrated within city operations and which is suitable for adaptation to the needs of individual Participating Municipalities ("RCx Policy Framework"). Implementer will review existing resources to aid in the development of the RCx Framework, including the commissioning and RCx policies developed by the California Commissioning Collaborative at http://www.cacx.org/.

> **Deliverables:**
>
> 1. RCx Policy Assessment and Planning Report
> 2. RCx Policy Framework
> 3. Draft RCx Policy for each Participating Municipality
> 4. Final RCx Policy for each Participating Municipality
> 5. Report on RCx Policy Stakeholder Input
> 6. For each Participating Municipality -Resolution adopting RCx Policy or documentation of why RCx Policy was not adopted and related alternate plans
> 7. Draft RCx Policy Outreach Plan
> 8. Final RCx Policy Outreach Plan
> 9. Monthly reports of tracked Performance Indicators

Best Practices/Lessons Learned from Strategic Plan (Draft)

2010-2012 Final Report

Date Approved (Advice Letter (NTP)): March 2011 (March 2011)

Date Completed (est.): Sep 2012   **Date Completed (actual):** December 2014

Estimated Cost: $ 440,327   **Final Program Cost:** $3,924,823 ($4,915,380 Budget)

Local Match Contribution: $0

Project Reimbursed for LG Staff Time: Ⓨ / N

Program Budget Unspent: $990,557

Best Practices
• Combining the adoption of a Cx/RCx policy with other tasks in the Green for Life program was a definite best practice. Retro-commissioning is little known and not easy to explain in simple terms. Linking the benchmarking and Cx/RCx policies with Energy Action Plans, Climate Action Plans and other Green for Life programs helped justify the need for these policies.

Lessons Learned
• City officials had concerns about the cost of implementing a retro-commissioning program. Having examples of RCx programs that had been implemented by other local governments or commercial property owners was helpful; more examples and real world case studies would have been beneficial.

Knowledge Transferred
• Through the Energy Leader Partnership, the Implementer has disseminated Green for Life program information to partners including the Coachella Valley Economic Partnership, Desert Valleys Builders Association, local water districts, and other local governments not served by SCE. We will continue to share information through our Green for Life website, articles in jurisdiction newsletters and websites, outreach events, presentations to community groups, and media/social media outreach.

Next Steps
• Continue to look for opportunities to promote RCx.

Benefit to the State

- The State will benefit from this task because it helped to integrate the California Long Term Energy Efficiency Strategic Plan (CLTEESP) into the operations of Participating Municipalities.

Benefit to Local Government

- The Green for Life program was designed to integrate long-term energy efficiency and climate action planning for our local governments with other elements of the Strategic Plan. We chose a strategy to bring together municipal energy efficiency tasks including benchmarking, commissioning/retro-commissioning, a utility management system, and energy action planning with sustainability programs -- green building and beyond Title 24 tasks as well as greenhouse gas inventories and climate action plans. These tasks were unified as a green government initiative with the Green for Life brand.

Successes

- Implementer completed Commissioning and Retro-commissioning (Cx/RCx) Policies for each of its Participating Municipalities. These policies identify:

    o Criteria for determining eligible and exempt facilities

    o Timelines for Cx/RCx

    o Frequency and trigger points for Cx/RCx

    o Roles and responsibilities for implementing the policies

    o Procedures for implementing the policies

- Six of the seven Participating Municipalities adopted the Cx/RCx Policy. The one that did not adopt the policy cited the potentially detrimental impact the policy might have on the operations of their facilities.

Challenges

- RCx is not well understood and implementation may be a challenge. Implementer tried to simplify the descriptions of RCx and use analogies (e.g. "well-tuned car"). More is needed to clarify benefits of RCx.

- For the smaller Participating Municipalities with relatively small buildings RCx may be less practical.

4.6.2   City of El Segundo – Phase 1

Local Government Partnership: Community Energy Partnership

Project Title: Develop and Adopt a Retro-Commissioning Policy

Project Purpose: The goal of this task is to lower energy usage and lower energy costs in municipal buildings and facilities. A secondary objective of this task is that the Implementer's employees and facilities foster a culture that includes the very best staff behavior and the most effective mechanical equipment, lighting and controls for long-term energy efficiency.

Project Scope and Components: Develop a Retro-commissioning (RCx) policy for municipal facilities that is consistent with the statewide RCx guidelines published by the California Commissioning Collaborative.

Deliverables:

1. Report on status of Implementer or Subcontractor to support the Task
2. Assessment and planning report for developing the RCx plan
3. Draft RCx policy
4. Final RCx policy
5. Monthly status report

Date Approved (Advice Letter (NTP)): March 2011 (April 2011)

Date Completed (est.): April 2012   **Date Completed (actual):** April 2012

Estimated Cost: $58,000   **Final Program Cost:** $454,153 (486,500 Budget)

Local Match Contribution: $0

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

Program Budget Unspent: $32,347

Best Practices
• Involvement of city staff in the development of commissioning/retro-commissioning policy and procedures.   o Fostering the involvement of city staff and industry professionals was critical to the development of the commissioning/retro-commissioning policy and procedures. City staff is fully familiar with the operations, their own city building stock, and resources available to make the adoption successful by identifying

which buildings have opportunities for commissioning/retro-commissioning.

- Utilizing external resources to provide technical guidance in the development of the procedures and policies

  o Properly commissioning/retro-commissioning a building requires technical knowledge to ensure energy savings. External resources (e.g., Southern California Edison, California Commissioning Collaborative, and California Energy Commission) were utilized as a resource to provide training and education to the City. These resources can also provide continual support to the City as it undergoes commissioning/retro-commissioning projects in the future.

- Promotes O&M building performance excellence and encourages energy efficiency

  o Commissioning/retro-commissioning promotes operations and maintenance and building performance excellence, it also requires the involvement of all stakeholders, including senior management, engineering, O&M personnel, contractors, vendors and facility users/occupants. The commissioning process is not a onetime event, but rather an ongoing activity that continues throughout the life-cycle of a facility.

Lessons Learned

- **Engage all stakeholders at the beginning of the program to gain early buy-in.** Many of the tasks required intra-departmental and inter-departmental support from staff not previously familiar with the overall goal and intent of the program. This lack of familiarity caused challenges and delays with the implementation of tasks. In the future, the Implementer would invite key Staff from various departments to participate in energy management and planning discussions to ensure transparent communication of the Implementer's energy reduction objectives.

Knowledge Transferred

- Implementer has the knowledge and tools necessary for performing continued commissioning practices which facilitate the implementation of strategies that will improve building performance.

Next Steps

- Implementer will utilize existing policy to further integrate effectively in municipals operations and maintenance programs continuous commissioning activities as a normal process in maintaining buildings and equipment. System (EEMIS)

Benefit to the State
• Local governments integrating energy efficiency in their municipal operations align with the State's "loading order" of first addressing energy efficiency as California's top priority resources.

Benefit to Local Government
• The Cx/RCX Policy promotes operations and maintenance and building performance excellence; implementation of procedures and tools developed through this program will provide the Implementer with persistence of benefits and continuous performance improvement over time. • By adopting a retro-commissioning policy and developing a set procedures the city's facilities will be updated to operate more efficiently, which will lower overall energy use and provide cost savings to the Implementer. An additional outcome is to improve the overall building environment and comfort.

Successes

• The Implementer adopted Commissioning Policy and Procedures for its own facilities in April 2012.
 	
• This Policy established guidelines and procedures for the Implementer to accomplish all four of the following types of commissioning activities:
   ○ New Building Commissioning (Cx)
   ○ Existing Building Retro-commissioning (RCx
   ○ Continuous Commissioning (CCx)
   ○ Monitoring-Based Commissioning (MBCx)
 	
• The policy specifies the:
   ○ Facilities that are subject to the policy,
   ○ Roles and responsibilities,
   ○ Timeline, and
   ○ Procedures for implementing the policy.
 	
• The Implementer developed an RCx Policy that was approved by City Council.
 	
• Staff training was held which included the current HVAC maintenance vendor.

Challenges
• Implementer encountered lack of peer organizations that had developed and adopted

> Cx/RCx Policies, difficult to gage how other cities implemented the policy and embedded the procedures in municipal operations.

4.6.3 County of Inyo – Phase 1

Local Government Partnership: Eastern Sierra Partnership

Project Title: Develop Commissioning/Retro-commissioning Policies for Implementer's Facilities

Project Purpose: Develop commissioning/retro-commissioning policies for Implementer's facilities to minimize energy use and associated GHG emissions by ensuring the facilities are operating properly using the concepts of commissioning and retro-commissioning and tailoring the processes to match the Implementer's facility types and sizes.

Project Scope and Components: Develop a Policy on Commissioning (for new buildings) ("Cx") or Retro-Commissioning (for existing buildings) ("RCx") municipal facilities. The policy will be presented to Inyo County Board of Supervisors for consideration. Implementer will develop a plan to encourage increased energy efficiency in new and altered development, including potentially identifying and prioritizing Implementer's facilities and activities to be modified to minimize energy use and related emissions. The computer tracking program and final plan will provide means to track progress, which will be implemented through the plan.

Deliverables:

1. Report on Status of Consultant or Subcontractor to Support the Task
2. Assessment and Planning Report for the Development of a Policy for Cx/RCx on Implementer's facilities
3. Draft Policy for Cx/RCx on Implementer's facilities
4. Report on Stakeholder Input: Cx/RCx on Implementer's facilities
5. Final Policy for Cx and RCx on Implementer's facilities
6. Submit Policy for Cx/RCx on Implementer's facilities to Board of Supervisors for consideration
7. Monthly Status reports

Date Approved (Advice Letter (NTP)): March 2011 (March 2011)

Date Completed (est.): February 2013   **Date Completed (actual):** November 2012

Best Practices/Lessons Learned from Strategic Plan (Draft)

2010-2012 Final Report

Estimated Cost: $13,966   **Final Program Cost:** $174,795 ($173,028 Budget)

Local Match Contribution: $0

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

Program Budget Unspent: $0

Best Practices
• Early involvement of "working level" facilities Staff is valuable in the overall success of the program. • Community involvement and shared governance is an important aspect in implementing policy changes

Lessons Learned
• Because many Implementer's facilities are leased and energy data is not publicly available. The Implementer had to obtain these data from the owners to provide the CESEAP team with any information or data required in order to fully analyze the Implementer's usage. • Political climate and garnering support: The consulting team and SCE team members were not residents of the County. They relied heavily on Staff to provide information on what the "local climate" will support; what the Board of Supervisors is looking for, and what would best fit the Implementer as a whole. It was important to keep the Implementer's own goals for the program at the forefront while also finding a way to meet Strategic Plan goals.

Knowledge Transferred
• This document serves as the primary mechanism of conveying best practices and lessons learned from this task. However, the implementer is available to discuss this further with any interested parties.

Next Steps
• The Implementer will develop a revolving energy efficiency fund to provide funding for energy efficiency projects through the 2013-2014 LGP Strategic Plan Pilot Program.

Benefit to the State
• The State will benefit from this task by having buildings and facilities that are operating

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> at optimal energy efficiency, thereby reducing energy use and GHG emissions.

Benefit to Local Government
• The Implementer's goals for the Cx/RCx policy are to ensure that County buildings function in a manner that promotes energy efficiency, cost savings, and optimizes equipment operation and occupant comfort. These findings will help to identify ways to ensure Implementer's facilities operate efficiently, which will lower overall energy use and provide cost savings.
• Policy will increase the potential for implementation of Cx/RCx in Implementer's facilities as an on-going consideration.
• Old/inefficient equipment will be recognized and potentially replaced more quickly.

Successes
• The Implementer adopted a Commissioning (Cx) and Retro-commissioning RCx) policy for its own facilities in November 2012.
• The policy specified the:
o Criteria for facilities to be considered for Cx and RCx,
o Frequency of RCx
o Conditions under which Cx/RCx can be performed, and
o Roles and responsibilities.

Challenges
• There were no significant challenges encountered during this task.

4.6.4   City of San Bernardino – Phase 2

Local Government Partnership: Community Energy Partnership

Project Title: Develop and Adopt a Retro-commissioning (RCx) Policy

Project Purpose: To develop and implement a Retro-Commissioning Policy for municipal facilities. Development and implementation of this policy will help the Implementer identify building operation, control, and maintenance problems that prevent buildings from performing optimally and improve performance.

Project Scope and Components: The Implementer will develop RCx policies for the Implementer to adopt that help them prioritize and implement energy efficiency projects in a cost-effective manner for the Implementer's facilities. Implementer will ensure that RCx policies developed are consistent with the statewide RCx guidelines published by the California Commissioning Collaborative.

Deliverables:

1. Report on status of Implementer or Subcontractor to support the Task
2. Assessment and Planning Report for the development of the RCx policy
3. RCx policy outline
4. Draft RCx policy
5. Final RCx policy; policy presented to the city council for adoption, if not adopted, preparation of memorandum explaining reasons for rejection and alternative plans
6. Monthly status report

Date Approved (Advice Letter (NTP)): December 2011 (January 2012)

Date Completed (est.): January 2013   **Date Completed (actual):** January 2013

Estimated Cost: $53,240   **Final Program Cost:** $258,468 ($512,620 Budget)

Local Match Contribution: $0

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

Program Budget Unspent: $254,152

Best Practices
• A retro-commissioning policy should specify timeline for RCx, Standards and guidelines for RCx, Roles and responsibilities

Lessons Learned
• The purpose of the Retro-commissioning (RCx) Policy is to establish guidelines and procedures for the Implementer to accomplish simultaneous RCx and auditing of its facilities. The goal is to reduce electricity costs, lower overall maintenance costs, extend equipment life, improve indoor air quality, and improve staff comfort and productivity.

Knowledge Transferred
• This document serves as the primary mechanism of conveying best practices and lessons learned from this task. However, the implementer is available to discuss this further with any interested parties.

Next Steps
• There are no Strategic Plan activities currently planned for the City of San Bernardino. However, the City of San Bernardino will continue to pursue Strategic Plan activities through the Community Energy Leader Partnership.

Benefit to the State
• The State will benefit from this task by having buildings and facilities that are operating at optimal energy efficiency, thereby reducing energy use and GHG emissions.

Benefit to Local Government
• The purpose of the Retro-commissioning (RCx) Policy is to establish guidelines and procedures for the Implementer to accomplish simultaneous RCx and auditing of its facilities. The goal is to reduce electricity costs, lower overall maintenance costs, extend equipment life, improve indoor air quality, and improve staff comfort and productivity.
• This Policy specifically addresses the combined, simultaneous RCx and auditing of buildings and energy systems. RCx is directly aligned with the Implementer's overall effort to increase energy efficiency of its municipal operations, reduce operating costs and to mitigate environmental impacts through energy management best practices.

Successes
• The Retro-commissioning Policy applies to all Implementer -owned buildings and energy systems for which the city regularly pays all or part of the annual energy bills, as specified by the Department of Public Works. The Policy specifies:
o Timeline for RCx
o Standards and guidelines for RCx
o Roles and responsibilities

Challenges
• There were no significant challenges in this task.

4.6.5   County of Santa Barbara – Phase 2

Local Government Partnership: South Santa Barbara Partnership

Project Title: Develop Commissioning/Retro-commissioning Policy for Municipal Facilities

Project Purpose: The Implementer will develop a commissioning/retro-commissioning policy that will enable the Implementer to ensure its existing facilities are operating at optimal efficiency. This serves as a model to the community of energy efficiency action.

Project Scope and Components: Implementer will develop and facilitate the adoption by Implementer of a policy for integration of commissioning and retro-commissioning into municipal operations ("Cx/RCx Policy"). Implementer will review existing resources to aid in the development of the Cx/RCx Policy. The Cx/RCx Policy will include descriptions of the benefits and purpose of the policy, procedures on how each activity will be conducted by staff to maximize building efficiencies, identify the lead expert within Implementer staff, an assessment of Cx/RCx opportunities for municipal facilities.

Deliverables:

1. Cx/RCx Policy Assessment and Planning Report
2. Cx/RCx Policy Outline
3. Draft Cx/RCx Policy
4. Final Cx/RCx Policy
5. Report on Cx/RCx Policy Stakeholder Input
6. Documentation of approval of Cx/RCx Policy by Implementer or documentation of why Cx/RCx Policy was not approved and related alternate plans
7. Draft Implementer staff Cx/RCx training materials
8. Final Implementer staff Cx/RCx training materials
9. Draft plan to share best practices and lessons learned with other local governments
10. Final plan to share best practices and lessons learned with other local governments
11. Monthly report of tracked Performance Indicators

Best Practices/Lessons Learned from Strategic Plan (Draft)

2010-2012 Final Report

Date Approved (Advice Letter (NTP)): December 2011 (December 2011)

Date Completed (est.): April 2013   **Date Completed (actual):** December 2013

Estimated Cost: $53,420   **Final Program Cost:** $421,998 ($492,766 Budget)

Local Match Contribution: $0

Project Reimbursed for LG Staff Time: Y / N

Program Budget Unspent: $70,768

Best Practices
• **Developing Criteria for Determining Which Buildings Should Be Commissioned.** The Policy establishes a process for assessing the value of commissioning throughout the life-cycle of a building and its equipment, rather than at discrete points in time; it establishes a basis for end-to-end commissioning of all planned and unplanned equipment replacement; and establishes operational performance criteria that serve as triggers for commissioning assessments. This broad facing approach to commissioning is a key to improving the Implementers building stock and maintaining long term operational performance.
• **Integrating Policy within the County's Existing Framework of Goals, Policy's, and Initiatives.**   The Policy was designed to complement the Implementer's existing framework of sustainability efforts, namely the Implementer's Energy Action Plan (EAP), Benchmarking Policy, and Utility Manager System (UMS). It is through this existing framework that effective commissioning can be leveraged.
o **T**he EAP defines the baseline operating conditions for, quantifies the Implementer's commitment to, and establishes performance goals for facilities, which creates the "need" for improvement. This can be realized cost-effectively through the commissioning process.
o The Benchmarking Policy provides visibility and transparency at the individual building level, facilitating project prioritization and selection.
o The UMS can be used to baseline energy savings performance (via sub-metering, measurement, and verification) and monitor trends in system performance to maintain savings persistence and identify buildings, systems, and equipment that warrant re-commissioning.

Lessons Learned
• To ensure support for approval, the Policy needed to address specific and relevant operational and maintenance challenges faced by the Implementer. As such, the Policy was developed specifically for the region through collaboration with Implementer staff, building condition assessments, and solicitation of stakeholder

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feedback.

- Understanding the basic functional and communication structure of the Implementer was a key to understanding the process and impetus of "how and why" projects get done.

- The Policy established a Commissioning Oversight Committee to manage the commissioning process; specifically, identify, assess, select, and oversee commissioning as an energy management resource in all planning and construction activity, and to navigate commissioning within the context of the Implementer's available resources.

- Development of the Policy focused as much on the policy implementation as the policy statement itself, to impose a "paradigm shift" in how the Implementer formally integrates commissioning within the budgets and regular activities of the building construction and management teams.

Knowledge Transferred

- This document serves as the primary mechanism of conveying best practices and lessons learned from this task. However, the implementer is available to discuss this further with any interested parties.

Next Steps

- The County of Santa Barbara pursued the following tasks for the 2013-2014 Strategic Solicitation Pilot:
    o Green Building Code
    o Energy Efficiency Revolving Fund

Benefit to the State

- The State will benefit from this task by having buildings and facilities that are operating at optimal energy efficiency, thereby reducing energy use and GHG emissions.

Benefit to Local Government

- The Implementer has used the Benchmarking, Utility Manager and RCx Policy to identify high energy users and make improvements.

- It was a goal of the Cx/RCx policy to integrate the Policy within the Implementer's Existing Framework of Goals, Policy's, and Initiatives and one of the first buildings to be identified as a poor performer, as a result of its ENERGY STAR score, became the

first building to undergo a RCx assessment.

- The Commissioning/Retro-Commissioning Policy, herein referred to as the "Policy", is intended to work in coordination with other Implementer energy management strategies and policies; specifically the Benchmarking Policy, the Utility Manager System, and the Energy Action Plan. In tandem, these policies provide a framework and tools for the Implementer to proactively manage the commissioning process of its building assets.

Successes

- The Implementer approved a Commissioning/Retro-commissioning (Cx/RCx) Policy for Implementer building in January 2015. The policy:

    o Establishes trigger criteria for Cx/RCx

    o Establishes protocols for prescribing in-house and third party commissioning activities

    o Defines roles and responsibilities

    o Establishes a protocol for assessing and identifying opportunities for RCx in existing buildings

    o Identifies opportunities for Staff training

- The policy is actively being put into effect and is being managed by the Capital Projects Manager. One of the objectives of SCE's Strategic Program was to expand energy efficiency expertise among local government staff. While the other elements of Phase II and Phase III are being managed by the Implementer's Energy Manager, this particular policy is now a tool being used by the Capital Projects Manager as he helps coordinate new construction and major remodels among County buildings.

Challenges

- **Cx/RCx policy funding:** After a few examples of Implementer's projects built without a Cx policy, that resulted in excessively high utility bills once the building was put into operation, Implementer staff began to understand the consequences of not budgeting for Cx (and RCx in a retrofit application) and staff came around to understanding and accepting that the policy is in place to prevent future Cx/RCx oversights.

    o The upfront budget impact of instituting the Cx/RCx Policy was challenging for the County Board of Supervisors to approve.

    o To get their agreement, Staff agreed to look for funding for Cx/RCx. By committing to looking for funding for Cx/RCx Staff was able to gain the Board's approval

    o A continuing challenge is that even though it's now approved, it will be difficult

> to ensure compliance. This is where the Implementer's Energy Manager and Capital Projects Manager continue to draw attention to the policy's existence and reminder staff of the benefits of Cx/RCx improvements.

4.6.6   City of Santa Monica – Phase 1

Local Government Partnership: Community Energy Partnership

Project Title: Municipal Facility Retro-commissioning Feasibility Study and Policy

Project Purpose: Develop and adopt a Retro-commissioning program for municipal buildings that will ensure that these buildings will operate at optimal energy efficiency. The program will provide a framework for identifying buildings that are prime candidates for retro-commissioning.

Project Scope and Components: Implementer will conduct a study to identify optimal candidate buildings for retro-commissioning ("RCx") work ("RCx Study"), and to use as the basis for the development of a municipal RCx policy. The RCx Study will produce generalized lessons regarding selection of facilities for RCx that will be used in the development of a municipal RCx policy, and making these lessons public and available to anyone considering RCx work. Implementer will develop a municipal RCx policy for consideration for adoption by Implementer. Implementer will facilitate the policy adoption process.

Deliverables:

1. Draft RFP (if competitive bid) or scope of work (if direct award) for consultation services for RCx Study and RCx policy development

2. Final RFP (if competitive bid) or scope of work (if direct award) for consultation services for RCx Study and RCx policy development

3. Contract award announcement for consultation services for RCx Study and RCx policy development

4. Draft RCx Study

5. Final RCx Study

6. Draft RCx policy

7. Final RCx policy

8. Report on RCx Policy Stakeholder Input

9. Resolution adopting RCx policy or documentation of why RCx policy was not adopted and related alternate plans

10. Draft plan and materials for sharing results of RCx Study

11. Final plan and materials for sharing results of RCx Study

12. Monthly report of tracked Performance Indicators

Date Approved (Advice Letter (NTP)): March 2011 (June 2011)

Date Completed (est.): September 2012   **Date Completed (actual):** August 2014

Estimated Cost: $50,000   **Final Program Cost:** $317,974 ($374,000 Budget)

Local Match Contribution: $0

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

Program Budget Unspent: $56,026

Best Practices
• Identify key building components to RCx
• Institute procurement/contracts to provide ongoing RCx services. Integrate into ongoing budgets.

Lessons Learned
• Small buildings should not be written off entirely in a retro-commissioning plan. Our plan calls for a less comprehensive set to retro-commissioning measures at several smaller buildings that are not good candidates for comprehensive retro-commissioning. Calibrating and re-programming thermostats can yield very cost effective energy saving.
• Building an awareness of funding opportunities will help move adoption of a retro-commissioning policy forward. Developing an understanding of the availability of outside funding for retro-commissioning was critical to getting the policy adopted. Technical assistance funds made available by the Local Government Partnership Program and the Regional Energy Network, helped ameliorate concerns over cost. In-house capabilities developed through the development of the retro-commissioning plan also helped reduce fears about cost.
• Build In-House Capabilities. Retro-commissioning is a process that is not familiar to many building owners and operators. It can be harder to understand than a typical energy efficiency retrofit because the measures are less tangible than equipment change outs. Getting building operators familiar with the retro-commissioning process required a series of meetings. However, the time spent with facilities maintenance and building operations personnel turned out to be valuable. By working with the

engineering firm, building operations personnel gained an understanding of the retro-commissioning process. By the time recommendations were made for specific buildings, our staff was familiar enough with the process that they could make the recommended changes themselves, saving the cost of an outside contractor and building internal capacity to keep the buildings running efficiently.   The development of a retro-commissioning plan and policy is an excellent opportunity to catalyze a discussion around efficiency building operation and to develop in-house capacity around efficient building operation.

Knowledge Transferred

- The final report from the engineering firm containing the Retro-commissioning Plan and Retro-commissioning Policy is a valuable document for any city considering energy efficiency. This document will be shared with several municipal groups that the Implementer participates in, including:

    o   Green Cities California

    o   Urban Sustainability Directors Network

    o   Community Energy Partnership

    o   Local Government Sustainable Energy Coalition

Next Steps

- Procure contractor to provide RCx services on an ongoing basis.

Benefit to the State

- By implementing retro-commissioning, the Implementer and the State will benefit from easy-to-implement and relatively low-cost options for energy efficiency.

Benefit to Local Government

- The Implementer will be able to implement relatively low cost measures to maintain efficient operation of energy efficient equipment.

Successes

- In 2012 the Implementer adopted a Policy to establish retro-commissioning (RCx) as a key element in pursuit of its "Sustainable City Plan" goals to reduce energy use and greenhouse gas emissions in Implementer-owned buildings and facilities. Retro-commissioning its buildings and facilities is a cost-effective way to achieve these

reductions. To support the Policy the Implementer prepared an RCx Plan.

- This RCx Plan provides specific guidance to the Implementer on methods to implement its RCx Policy. It describes comprehensive and targeted approaches to conducting RCx in its buildings, and describes the criteria used and the buildings evaluated and recommended for these approaches. Financial criteria and guidelines for establishing RCx project budgets are provided, as well as for implementing individual RCx energy savings measures.

- This plan describes how the Implementer may set up its organizational structure to accomplish, improve, and maintain the benefits achieved through RCx. It describes the RCx implementation process step-by-step from the Implementer's organizational structure, as well as on a building-by-building basis. It describes how to maintain energy savings either through an on-going or a re-commissioning process.

- This plan recommends tracking progress toward policy goals, and reviewing the effectiveness of the RCx Plan and Policy to more effectively meet the Implementer's goals.

Challenges

- Retro-commissioning is a process that is not familiar to many building owners and operators. It can be harder to understand than a typical energy efficiency retrofit because the measures are less tangible than equipment change outs. Getting building operators familiar with the retro-commissioning process required a series of meetings.

4.6.7 City of Simi Valley – Phase 2

Local Government Partnership: Simi Valley Partnership

Project Title: Develop Retro-Commissioning (RCx) Policy

Project Purpose: Develop and adopt a Retro-commissioning policy for municipal buildings that will help ensure that these buildings will operate at optimal energy efficiency.

Project Scope and Components: The Implementer will develop an RCx policy for municipal facilities that is consistent with the statewide RCx guidelines published by the California Commissioning Collaborative.

   Deliverables:

1. Report on status of Implementer or Subcontractor to support the Task
2. RCx policy Assessment and Planning Report

3. Draft RCx policy

4. Develop final RCx policy for city council   approval. Obtain decision by city council on adoption of RCx policy

5. Monthly status report

Date Approved (Advice Letter (NTP)): December 2011 (December 2011)

Date Completed (est.): December 2012   **Date Completed (actual):** November 2013

Estimated Cost: $58,000   **Final Program Cost:** $611,356 ($389,500 Budget)

Local Match Contribution: $0

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

Program Budget Unspent: $0

Best Practices

• The Commissioning process falls into three categories:
 	
   ○ Commissioning (Cx). A quality assurance process applied to new buildings, prior to occupancy, to ensure that system operation meets owner criteria and design intent.
 	
   ○ Retro-commissioning (RCx). A quality assurance process applied to existing buildings to ensure that system operation meets owner criteria and design intent. In this case, it is assumed that the building was not commissioned prior to occupancy. Un-commissioned buildings often do not meet operational goals or requirements. Existing Implementer facilities that have high occupancies, such as City Hall, and the Senior Center may benefit from this type of commissioning activity.
 	
• Re-Commissioning (ReCx). A quality assurance process applied to existing buildings to ensure that system operation meets owner criteria and design intent. In this case, it is assumed that the building was commissioned prior to occupancy. The decision to re-commission may be triggered by a change in building use or ownership, the onset of operational problems, or some other need. This type of commissioning activity would only apply to the Transit Maintenance Facility at some point in the future, if needed.

Lessons Learned
• Key staff was not familiar with benefits and fast payback of RCx, or how IOU incentive programs supported RCx.

- o The policy would be ineffective unless staff was educated on RCx availability for the City's main facilities.

- o Staff attended RCx training program presented by SCE and SoCalGas, as well as program presented by LA County Public Works. Following the training the City prepared a Request for Proposals for the RCx of the main City Hall building.

Knowledge Transferred

- This document serves as the primary mechanism of conveying best practices and lessons learned from this task. However, the implementer is available to discuss this further with any interested parties.

Next Steps

- Staff is working with SCE and SoCalGas to implement RCx of City Hall.

Benefit to the State

- The State will benefit from this task by having buildings and facilities that are operating at optimal energy efficiency, thereby reducing energy use and GHG emissions.

Benefit to Local Government

- The implementation of the Retro-commissioning Policy for City Facilities will reduce the costs to operate Implementer's buildings by targeting the functional performance of building systems, including how occupants use them, and identifying capital-based measures to return the performance of building systems to optimal conditions.

Successes

- The City developed an RCx Policy that was approved by City Council.

- Staff training was held to highlight the benefits of RCX to key personnel that are responsible for facilities operation and maintenance.

- The Commissioning process falls into three categories:

  - o Commissioning (Cx). A quality assurance process applied to new buildings, prior to occupancy, to ensure that system operation meets owner criteria and design intent.

  - o Retro-commissioning (RCx). A quality assurance process applied to existing

buildings to ensure that system operation meets owner criteria and design intent. In this case, it is assumed that the building was not commissioned prior to occupancy. Un-commissioned buildings often do not meet operational goals or requirements. Existing Implementer facilities that have high occupancies, such as City Hall, and the Senior Center may benefit from this type of commissioning activity.

- o Re-Commissioning (ReCx). A quality assurance process applied to existing buildings to ensure that system operation meets owner criteria and design intent. In this case, it is assumed that the building was commissioned prior to occupancy. The decision to re-commission may be triggered by a change in building use or ownership, the onset of operational problems, or some other need. This type of commissioning activity would only apply to the Transit Maintenance Facility at some point in the future, if needed.

- The Implementer operates eight facilities that will be considered for RCx or for performance evaluations and improvements. These eight facilities are: City Hall, Cultural Arts Center, Development Services, Police Department, Senior Center, Sanitation/Waterworks, Public Services Facility, and Transit Facility.

- City staff from the Public Works, Administrative Services and Environmental Services Departments will develop the RCx approach and staff responsibilities, budgets and services needed to implement the RCx process.

- The Retro-commissioning Policy was approved by City Council in November 2012.

Challenges

- Key staff was not familiar with benefits and fast payback of RCx, or how IOU incentive programs supported RCx.

- o The policy would be ineffective unless staff was educated on RCx availability for the City's main facilities.

- o Staff attended RCx training program presented by SCE and SoCalGas, as well as program presented by LA County Public Works. Following the training the City prepared a Request for Proposals for the RCx of the main City Hall building.

4.6.8   City of South Gate – Phase 1

Local Government Partnership: South Gate Partnership

Project Title: Develop commissioning/retro-commissioning policies for municipal facilities

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Best Practices/Lessons Learned from Strategic Plan (Draft)

Project Purpose: Develop and adopt a Retro-Commissioning Policy for Implementer's facilities to ensure those facilities are operating at optimal energy efficiency. A retro-commissioning process will provide Implementer the opportunity to identify building operation, control, and maintenance problems that prevent our buildings from performing optimally and in alignment with how the buildings are currently used.

Project Scope and Components: The Implementer will develop and facilitate the adoption by the Implementer of a policy for integration of RCx into Implementer municipal operations ("RCx Policy"). Implementer will review existing resources to aid in the development of the RCx Policy, including the RCx policies developed by the California Commissioning Collaborative at http://www.cacx.org/.

Deliverables:

1. RCx Policy Assessment and Planning Report
2. RCx Policy Outline
3. Draft RCx Policy
4. Final RCx Policy
5. Report on RCx Policy Stakeholder Input
6. Documentation of approval of RCx Policy for by City Manager or documentation of why RCx Policy was not approved and related alternate plans
7. Draft Implementer staff RCx training materials
8. Final Implementer staff RCx training materials
9. Draft plan to share best practices and lessons learned with other local governments
10. Final plan to share best practices and lessons learned with other local governments
11. Monthly report of tracked Performance Indicators

Date Approved (Advice Letter (NTP)): March 2011 (May 2011)

Date Completed (est.): October 2012   **Date Completed (actual):** November 2013

Estimated Cost: $38,500   **Final Program Cost:** $887,332 ($886,000 Budget)

Local Match Contribution: $0

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

Program Budget Unspent: $0

Best Practices
• Involvement of Implementer staff in the development of commissioning/retro-commissioning policy and procedures
• Fostering the involvement of Implementer staff with energy consultants was critical to the development of the commissioning/retro-commissioning policy. Key staff worked with the consulting team to structure a policy that would be pragmatic and feasible based on the current conditions including staffing levels and knowledge. Due to staff involvement, training was noted as an important element to build capacity to ensure success of the policy in the future.
• Utilized external resources to provide technical guidance in the development of the procedures and policies
• Properly commissioning/ retro-commissioning a building requires technical knowledge to ensure energy savings. External resources (e.g., Southern California Edison, California Commissioning Collaborative, and California Energy Commission) were utilized as a resource to provide training and education to the City. These resources can also provide continual support to the City as it undergoes commissioning/retro-commissioning projects in the future.
• Working closely with HVAC maintenance service contractors to integrate retro-commissioning measures
o Working with the HVAC contractor during the development of the policy ensured that commissioning/retro-commissioning was identified as a key element of the Implementer's future maintenance agreement.
o Staff training was held which included the current HVAC maintenance vendor

Lessons Learned
• Examples of commissioning/retro-commissioning policies of peer municipalities, organizations, and associations were difficult to obtain which limited the Implementer's ability to identify local government best practices.
• Existing retro-commissioning policies have limited applicability to Implementer.
• It was found that commissioning/retro-commissioning is most common for larger facilities (50,000 square feet and above) with direct digital control systems that are highly interactive such as energy management systems. No more than two of Implementer's municipal buildings meet this criteria. However, the Implementer did find examples of retro-commissioning on a smaller scale (micro-commissioning) that helped in creating a tailored policy suitable to the Implementer's building portfolio. Additionally, elements of the retro-commissioning process were identified to enhance the Implementer's existing O&M practices. For example, the Implementer sent five (5) staff to Building Operator Certification training to improve the overall management of municipal facilities.

Knowledge Transferred
• Staff training was held that included the current HVAC maintenance vendor.

Next Steps
• There are no Strategic Plan activities currently planned for the City of South Gate. However, South Gate will continue to pursue Strategic Plan activities through the Gateway Cities Energy Leader Partnership.

Benefit to the State
• The State will benefit from this task by having buildings and facilities that are operating at optimal energy efficiency, thereby reducing energy use and GHG emissions.

Benefit to Local Government
• The Implementer will benefit from retro-commissioning (RCx) due to how an RCx program can improve how existing buildings and equipment function by resolving problems that occurred during design or construction or that have developed throughout the building's life (e.g. through system wear-and-tear or lack of proper maintenance).
• RCx aims to improve a building's energy performance and to ensure the building is operating according to the original design intent. The improvement of operations and maintenance (O&M) procedures as part of this process would help ensure that buildings continue to operate at their optimum state and that resulting energy savings would be more likely to persist.

Successes
• The Implementer developed an RCx Policy that was approved by City Council in May 2012.
• Staff training was held which included the current HVAC maintenance contractor to ensure consistent implementation of the program.
• Five (5) staff received BOC I certification
• Key elements of the RCx Policy include:
o Larger facilities (>50,000 sq.-ft.) and equipment that are the largest users of energy (e.g. HVAC systems) are to be retro-commissioned periodically (not to exceed every 10 years).
o As part of the RCx process, systems that are identified to need upgrade or

> replacement within the next five (5) years will be recommended for inclusion in the Capital Improvement Plan.
>
> o Ongoing or continuous RCx procedures that are deemed to require periodic accomplishment shall be integrated into the Implementer's Preventative Maintenance System (PMS) or may be assigned to a current maintenance contractor. Additionally, all HVAC maintenance shall be conducted in accordance with ASHRAE/ACCA Standard 180-2008, Standard Practice for Inspection and Maintenance of Commercial Building HVAC Systems.
>
> o The Implementer shall take advantage of programs and resources available from Southern California Edison including their Retro-commissioning Program and the HVAC Optimization Program to the greatest extent possible.
>
> o All new facilities and energy systems are to be commissioned prior to being placed in service in accordance with the appropriate manufacturers' operations manuals and other appropriate standards and guidelines addressed in the procedures section of the policy.
>
> - Training is available to appropriate city staff to expand in-house capacity to support and pursue RCx activities as well as to improve O&M practices to maintain facilities and energy systems at their optimum level of energy performance.
>
> - The policy identifies relevant standards and guidelines on which the RCx services will be based. These standards and guidelines include:
>
>   o California Energy Commission, "California Commissioning Guide: New and Existing Buildings (2006),"
>
>   o ASHRAE Guideline 0-2005 (The Commissioning Process),
>
>   o ASHRAE Guideline 1.1-2007 (HVAC&R Technical Requirements for The Commissioning Process,
>
>   o ANSI/ASHRAE/IES Standard 90.1-2010 (Energy Standard for Buildings Except Low-Rise Residential Buildings)
>
>   o California Investor-Owned Utilities Statewide Retro-commissioning Policy & Procedures Manual,
>
>   o ASHRAE/ACCA Standard 180-2008, Standard Practice for Inspection and Maintenance of Commercial Building HVAC Systems,
>
>   o ANSI/ASHRAE/IESNA Standard 100-2006, Energy Conservation in Existing Buildings, and
>
>   o IES DG-29-11 The Commissioning Process Applied to Lighting and Control Systems.

Challenges
• Key staff was not familiar with RCx and the Implementer's facilities were not typical candidates for RCx.

- Staff attended RCx training including five (5) staff that completed and passed the Building Operators Certification Training Level I.

- The policy would be ineffective unless staff was educated on RCx and the policy was tailored to the Implementer's building stock.

5.   Strategic Plan Goal 4 – Leading the Community

"Local governments lead their communities with innovative programs for energy efficiency, sustainability and climate change"

5.1   Strategic Plan Task 4.1.1 – Community-Wide EAP/CAP Template

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

5.1.1   Coachella Valley Association of Governments – Phase 1

Local Government Partnership: Desert Cities Partnership

Participating Municipalities: Blythe, Cathedral City, Desert Hot Springs, Indian Wells, Palm Springs, Rancho Mirage, and the Agua Caliente Band of Cahuilla Indians

Project Title: Regional Climate Action Plan Energy Efficiency Chapter Template

Project Purpose: The Participating Municipalities will lead the efforts of their communities to integrate energy efficiency, sustainability, and climate change actions. The approach is to expand on the initiative taken by our local governments to lead their communities by developing a framework for a community Climate Action Plan /Energy Action Plan that will be the basis for individual, customized Climate Action and Energy Action Plans for each Participating Municipality.

Project Scope and Components: The Implementer will collaborate with other regional entities to develop a regional CAP energy efficiency chapter template which integrates climate action planning and energy efficiency efforts to ensure consistent and mutually supportive goals, policies, and actions ("EE CAP Template").

> **Deliverables:**

1. EE CAP Assessment and Planning Report
2. Draft regional EE CAP Template
3. Final regional EE CAP Template
4. Report on EE CAP Template Stakeholder Input
5. Monthly reports of tracked Performance Indicators

Date Approved (Advice Letter (NTP)): March 2011 (March 2011)

Date Completed (est.): Jan 2012   **Date Completed (actual):** May 2013

Estimated Cost: $94,500   **Final Program Cost:** $3,924,823 ($4,915,380 Budget)

Local Match Contribution: $0

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

Program Budget Unspent: $990,557

Best Practices
• The development of a regional template for a Climate Action Plan was well received by participating jurisdictions. We worked together with member agencies to find a template that met their needs.   • We integrated the Energy Action Plan and Climate Action Plan template tasks and worked with member agencies to make the CAP template useful to them, including short-term and long-term climate action goals.

Lessons Learned
• The climate action template was a very good first step in this process as none of our jurisdictions had completed a CAP. The template provided a way to work through the needs of each jurisdiction and ways to customize the CAP for their needs.   • It was beneficial to spend time with the participating jurisdictions getting their input on the Climate Action Plan process and providing background on the concepts behind climate action planning.

Knowledge Transferred
• Through the Energy Leader Partnership, the Implementer has disseminated Green for Life program information to partners including the Coachella Valley Economic Partnership, Desert Valleys Builders Association, local water districts, and other local governments not served by SCE. We will continue to share information through our Green for Life website, articles in jurisdiction newsletters and websites, outreach events, presentations to community groups, and media/social media outreach.

Next Steps

- The CAP template was fully integrated into the climate action planning process for all participating jurisdictions. This task is done.

Benefit to the State

- Developing a template for CAP/EAP provides Local Governments, and the State, the benefit of helping to simplify the development of a CAP/EAP. The simplification will help drive increased development of quality CAP/EAP, providing the Local Government with a roadmap for reducing energy use and GHG emissions.

Benefit to Local Government

- The template will provide a consistent set of data and information that can be aggregated to a regional basis for inclusion in a regional CAP.

- The Green for Life program was designed to integrate long-term energy efficiency and climate action planning for our local governments with other elements of the Strategic Plan. We chose a strategy to bring together municipal energy efficiency tasks including benchmarking, commissioning/retro-commissioning, a utility management system, and energy action planning with sustainability programs -- green building and beyond Title 24 tasks as well as greenhouse gas inventories and climate action plans. These tasks were unified as a green government initiative with the Green for Life brand.

Successes

- Implementer developed a template to be used for the energy efficiency Chapter of community Climate Action Plans (CAPs) for each of the Participating Municipalities.

  o The template was vetted through stakeholder meetings.

  o The template will be populated with data specific to the Participating Municipality resulting in a customized energy efficiency chapter of a community CAP for the Participating Municipality.

Challenges

- No significant challenges were met in developing the CAP template.

5.1.2   City of Delano – Phase 1

Local Government Partnership: Kern County Partnership

Project Title: Update General Plan with Climate policies

Project Purpose: The goal of this task was to develop the energy chapter of the Implementer's Climate Action Plan (CAP), to be consistent with the Implementer's General Plan (including the concurrently developed Health and Sustainability Element) and specifically to develop an energy efficiency action plan that conforms to the goals of AB32 and SB375.

Project Scope and Components: Implementer will develop an energy chapter of the Implementer's Climate Action Plan by developing a baseline GHG inventory, incorporating work on a GHG inventory and energy efficiency program or strategies for the municipal sector done by Kern COG under the Strategic Plan Strategies Pilot Program. Implementer will gather stakeholder feedback and complete the final CAP. It will then update the General Plan with energy efficiency and climate language.

Deliverables:

1. Report on Status of Consultant or Subcontractor to Support the Task
2. Assessment and Plan for Development of a CAP
3. Draft CAP
4. Report on Stakeholder Input
5. Final CAP
6. Updated General Plan with Climate policies
7. Submit Updated General Plan to City Council for adoption
8. Report on Dissemination of Lessons Learned/Best Practices to Other Municipalities
9. Monthly reports of tracked Performance Indicators

Date Approved (Advice Letter (NTP)): March 2011 (August 2011)

Date Completed (est.): September 2012   **Date Completed (actual):** January 2014

Estimated Cost: $205,090   **Final Program Cost:** $324,549 ($379,500 Budget)

Local Match Contribution: $0

Project Reimbursed for LG Staff Time: Ⓨ / N

Program Budget Unspent: $133,951

Best Practices

- The CAP identifies community energy sectors that are conducive to efficiency improvements, and prioritizes strategies and actions that will enable Implementer to increase energy efficiency and reduce GHG emissions across all emissions sectors. The emphasis is on long-term, sustainable reductions in GHG emissions as opposed to short-term initiatives that would end once the CAP is implemented.

Lessons Learned

- The Climate Action Plan must take into account the political and economic environment of the community. Lack of Staff resources and community resistance to mandates for energy efficiency prevented Implementer from adopting measures that would have provided deep energy and GHG reductions by the year 2020.

Knowledge Transferred

- This document serves as the primary mechanism of conveying best practices and lessons learned from this task. However, the implementer is available to discuss this further with any interested parties.

Next Steps

- The Implementer will use the Climate Action Plan as a path for future policy/project development. Additionally, the Implementer will continue to work on the strategies outlined in this Climate Action Plan.

Benefit to the State

- The State will benefit from this task because the strategies developed for the Participating Municipality will help to meet state Green House Gas (GHG) reduction goals - AB 32 which sets the state adopted target to reduce GHG emissions to 1990 levels by 2020 and the state's long-term goal to reduce emissions 80% below 1990 levels by 2050.

Benefit to Local Government

- The Implementer has a Climate Action Plan that provides a comprehensive roadmap for increasing energy efficiency and reducing GHG emissions in the community, thus better preparing us for a more carbon-constrained future. It provides a strong foundation to build upon, to achieve greater energy efficiencies in the community that will likely be required by future legislation and CEQA review of development projects.

- The energy chapter of the CAP includes future GHG reduction and energy efficiency targets that impel the integration of energy efficiency and climate action planning activities into the daily operations of local residents, businesses and local government. Targets are based on the goals of AB 32 and what is achievable through the local government's control over its facilities and operations and through community-wide actions. The CAP identifies community energy sectors that are conducive to efficiency improvements, and prioritizes strategies and actions that will enable Implementer to increase energy efficiency and reduce GHG emissions across all emissions sectors. The emphasis is on long-term, sustainable reductions in GHG emissions as opposed to short-term initiatives that would end once the CAP is implemented.

Successes

The Implementer developed a Climate Action Plan that:

- Demonstrates leadership in these areas, especially for cities like Implementer, with:
    - Limited staff and program budgets,
    - Depressed, low-wage economy: and
    - High unemployment.

- Is consistent with Implementer's General Plan, including newly adopted Health and Sustainability Element.

- Includes policies and programs that will reduce energy usage, are consistent with Implementer's staffing and budget needs, and with community values.

Challenges

- Developing strategies that, cumulatively, will provide the energy efficiencies and associated GHG emissions reductions needed to keep the City on track to meet the goals of AB 32.

- Lack of Staff resources and community resistance to mandates for energy efficiency prevented Implementer from adopting measures that would have provided deep energy and GHG reductions by the year 2020.

- City Council adopted CAP on December 20, 2014.

5.1.3   County of Inyo – Phase 1

Local Government Partnership: Eastern Sierra Partnership

Project Title: Develop a Regional Template for EAP

Project Purpose: Develop a regional template for EAP that may be used by other agencies, tribes and entities in the County to develop EAPs for their facilities.

Project Scope and Components: Develop a template for EAPs, to track energy use in the County, incorporating inventories, policy development, and programs. This will provide an EAP template for use by other agencies, tribes, and other entities in the County to consider and implement to reduce their energy use. Through the process, final reports will be provided to methodically refine the language. The final report will provide the regional template.

Deliverables:

1. Report on Status of Consultant or Subcontractor to Support the Task
2. Assessment and Plan for Development a Regional Template for EAP
3. Draft EAP Template
4. Report on Stakeholder Input
5. Final EAP Template
6. Monthly Status reports

Date Approved (Advice Letter (NTP)): March 2011 (March 2011)

Date Completed (est.): January 2013   **Date Completed (actual):** May 2012

Estimated Cost: $27,266   **Final Program Cost:** $174,795 ($173,028 Budget)

Local Match Contribution: $0

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

Program Budget Unspent: $0

Best Practices
• Conceptualize what the Implementer wants from the template and who would be using it. The target users were defined as "organizations" within the county including cities and tribes.
• The Implementer wanted a step by step template that explained how to use the Energy Star Portfolio Manager, what the results meant, how to interpret them, how to formulate programs specific to the organization, and available incentives.

- The template was based off of EAP's created by other counties around California.

- The stakeholders were used throughout the process to get an accurate idea of what they wanted out of the template.

- The template is currently being used by the City of Bishop with the help of the High Sierra Energy Foundation and the Big Pine Paiute tribe may also be using it in the future. The team also used the template to create the County's Municipal Energy Action Plan.

Lessons Learned

- Early involvement of "working level" facilities staff is valuable in the overall success of the program.

- Community involvement and shared governance is an important aspect in implementing policy changes

- Because many County facilities are leased and energy data was not public knowledge, the owners needed to provide the CESEAP team with any information or data required in order to fully analyze the Implementer's usage.

- Political climate and garnering support: the consulting team and SCE team members were not residents of the County. They relied heavily on Staff to provide information on what the "local climate" will support; what the Board of Supervisors is looking for, and what would best fit the County as a whole. It was important to keep the Implementer's own goals for the program at the forefront while also finding a way to meet Strategic Plan goals.

Knowledge Transferred

- By using the EAP template to prepare an Energy Action Plan, other cities and organizations within the County will have a plan to decrease energy use.

Next Steps

- The Implementer will develop a revolving energy efficiency fund to provide funding for energy efficiency projects through the 2013-2014 LGP Strategic Plan Pilot Program.

Benefit to the State

- Developing a template for CAP/EAP provides Local Governments, and the State, the benefit of helping to simplify the development of a CAP/EAP. The simplification will help drive increased development of quality CAP/EAP, providing the Local Government with a roadmap for reducing energy use and GHG emissions.

Benefit to Local Government
• The regional template provided the structure for other entities to implement and develop their own EAP which further encouraged energy reduction in their own facilities.

Successes
• The Implementer developed a template for an EAP that would be used for the Implementer's EAP and could be used by other Local Governments in the County and surrounding region. The template allows the Local Governments to track energy use, incorporating inventories, policy development, and programs.
• Regional Template has been approved and is currently being used by cities and organizations within the County.
• Performed a GHG inventory and savings analysis.

Challenges
• Because many County facilities are leased and energy data was not public knowledge, the owners needed to provide the CESEAP team with any information or data required in order to fully analyze the Implementer's usage.
• Political climate and garnering support: the consulting team and SCE team members were not residents of the County. They relied heavily on Staff to provide information on what the "local climate" will support; what the Board of Supervisors is looking for, and what would best fit the County as a whole. It was important to keep the Implementer's own goals for the program at the forefront while also finding a way to meet Strategic Plan goals.

5.1.4   Kern Council of Governments – Phase 1

Local Government Partnership: Kern County Partnership

Participating Municipalities: California City, Delano, McFarland, Ridgecrest, Tehachapi, and Kern County

Project Title: Develop Regional Energy Action Plan Template

Project Purpose: Develop a template for Energy Action Plans that will be the template for a regional EAP comprising EAPs for the Participating Municipalities. Through this developmental

process Implementer will foster a cooperative, information sharing environment among the Participating Municipalities.

Project Scope and Components: Implementer will develop a regional EAP template ("REAP template") that can be used by Participating Municipalities as a basis for their respective EAPs. The REAP Template will focus on a comprehensive analysis of opportunities for local governments to reduce energy consumption, achieve energy efficiency, and reduce GHG emissions. Implementer will facilitate the creation and management of a working group for the REAP Template, composed of representatives of Participating Municipalities (members of the EAP Working Group). Implementer will ensure that the final REAP Template is completed and approved by all Participating Municipalities.

> **Deliverables:**

1. Draft consultant Scope
2. Final consultant Scope
3. Draft MOUs
4. Final MOUs 5. Draft RFP
5. Draft RFP
6. Final RFP
7. Bid Award Announcement
8. Documentation of EAP Working Group formation, including a description of the working group's goals and a list of members
9. Minutes from all EAP WG meeting
10. Draft REAP Assessment and Planning Report
11. Final REAP Assessment and Planning Report
12. Draft REAP Template
13. Final REAP Template
14. Monthly report of tracked Performance Indicators

Date Approved (Advice Letter (NTP)): March 2011 (August 2011)

Date Completed (est.): Dec 2011   **Date Completed (actual):** Mar 2014

Estimated Cost: $280,020   **Final Program Cost:** $1,065,570 ($1,176,000 Budget)

Local Match Contribution: $0

Project Reimbursed for LG Staff Time: Y / N

Program Budget Unspent: $110,480

Best Practices

- **Development of a detailed implementation plan is critical.** Bundling smaller tasks that can be implemented across a variety of municipal buildings for execution at one time.

- **Review utility bills regularly.** While most jurisdictions meet regularly with their utility account representative to confirm account rate class designation and verify accuracy, the review required to develop the GHG Energy Efficiency Report required cities to develop reasoning for upward or downward swings in usage and to confirm if accounts were correctly assigned. This is a very useful exercise as it draws attention to account and sector level trends and raised questions for city staff to address.

Lessons Learned

- **For a regional effort like the REAP, fully develop one EAP for review and comment before proceeding with the rest of the Participating Municipalities.** It is impossible to anticipate how an individual document will evolve as it is reviewed and revised over time. As each EAP was developed, lessons were learned and ideas evolved regarding information requirements and how to best to present that information. Since each EAP is customized to the needs of the local jurisdiction, this approach will mitigate editing and version control challenges, but will not eliminate them entirely.

- **Anticipate that utility data requests will require substantial lead time.** Coordination with utilities to obtain usage data can be extremely time consuming.

- **Anticipate data collection challenges.** The time required for inventory data collection stretched way beyond original projections because local government staff were not able to respond in a timely manner. For most staff, who are already working in short-staffed departments and for whom collection of GHG inventory data was a task outside their normal responsibilities, finding the time needed to respond to our inquiries was difficult.

- **Design EAP strategies to harmonize with jurisdiction goals and needs.** Several jurisdictions were concerned that adoption of the EAP would tie their hands on future projects, limiting their ability to respond to emergency maintenance needs or to capitalize on utility or other grant and incentive programs, if the EAP strategies were to take precedence. Language was created in the EAP to allay these concerns. Some LGPs opted to "accept" the EAP rather than to "adopt" the document.

Knowledge Transferred

- An Energy Action Plan Workgroup was created by establishing a standing item on the Regional Planning Advisory Committee (RPAC) meeting agenda. The EAP Workgroup agenda items allowed for sharing process and information across jurisdictions and with the public.

Next Steps

- The cities of California City, Delano, McFarland, Ridgecrest, Tehachapi, and the County of Kern will continue to pursue Strategic Plan activities through the Kern County Energy Leader Partnership.

Benefit to the State

- Developing a template for CAP/EAP provides Local Governments, and the State, the benefit of helping to simplify the development of a CAP/EAP. The simplification will help drive increased development of quality CAP/EAP, providing the Local Government with a roadmap for reducing energy use and GHG emissions.

Benefit to Local Government

- Developing a template for CAP/EAP provides Local Governments, and the State, the benefit of helping to simplify the development of a CAP/EAP. The simplification will help drive increased development of quality CAP/EAP, providing the Local Government with a roadmap for reducing energy use and GHG emissions.

Successes

- Implementer developed a template for Energy Action Plans for its Participating Municipalities. The Municipal EAP Template was to be used by each Participating Municipality as the starting point for a customized plan representing their vision, goals, and unique profile of energy use and GHG emissions for municipal facilities. The REAP Template provides a useful starting point that includes pre-developed energy efficiency measures appropriate for Participating Municipalities' community EAP. Each Participating Municipality will use it to develop a customized EAP according to its particular opportunities and constraints. The EAP template is designed to facilitate goal setting, strategy development, and the selection and prioritization of energy efficiency measures. It provides a framework for describing policies and measures already in place, for identifying new opportunities, and quantifying the costs and benefits of individual actions, all with the aim of developing an EAP that can be adopted and implemented by the local government.

Challenges
• The time required for inventory data collection stretched way beyond original projections because local government staff were not able to respond in a timely manner. For most staff, who are already working in short-staffed departments and for whom collection of GHG inventory data was a task outside their normal responsibilities, finding the time needed to respond to our inquiries was difficult.
• Several jurisdictions were concerned that adoption of the EAP would tie their hands on future projects, limiting their ability to respond to emergency maintenance needs or to capitalize on utility or other grant and incentive programs, if the EAP strategies were to take precedence. Language was created in the EAP to allay these concerns. Some LGPs opted to "accept" the EAP rather than to "adopt" the document.

5.2   Strategic Plan Task 4.1.2 – Customized EAP/CAP

Customize CAP with energy efficiency language and data

5.2.1   Coachella Valley Association of Governments – Phase 1

Local Government Partnership: Desert Cities Partnership

Participating Municipalities: Blythe, Cathedral City, Desert Hot Springs, Indian Wells, Palm Springs, Rancho Mirage, and the Agua Caliente Band of Cahuilla Indians

Project Title: Customize EAP Template with Energy Efficiency Language and Data

Project Purpose: Using the template developed in SP Task 4.1.1 prepare an energy efficiency chapter for the community Climate Action Plan for each Participating Jurisdiction for adoption. The integration of climate action planning and energy efficiency will build strong public support for greenhouse gas reduction. Through this effort Implementer will provide support for climate action and energy action planning for its jurisdictions. Specifically, this program will assist disadvantaged communities and reach out to low income areas, including the City of Desert Hot Springs, one of the poorest cities in the state. The regional approach provides for a consistent planning process that will provide for a more seamless integration with utility programs.

Project Scope and Components: Customize EE CAP Template: Implementer will customize the regional EE CAP Template developed under SP Task 4.1.1 (Regional Climate Action Plan Energy Efficiency Chapter Template) for each Participating Municipality. The EE CAP will promote climate action as a way to achieve substantial and sustained progress toward energy efficient technologies and practices throughout the community. The Implementer will ensure the

development of individual EE CAPs for Participating Municipalities is a collaborative effort by which best practices are identified, shared and used, as appropriate.

>   **Deliverables:**
>
>   1. Draft energy efficiency CAP Development Plan
>   2. Final energy efficiency CAP Development Plan
>   3. Draft energy efficiency CAP for each Participating Municipality
>   4. Final energy efficiency CAP for each Participating Municipality
>   5. Report on energy efficiency CAP Stakeholder Input
>   6. For each Participating Municipality - Resolution adopting the energy efficiency CAP or documentation of why the energy efficiency CAP was not adopted and related alternate plans
>   7. Draft policy for energy efficiency CAP updates
>   8. Final policy for energy efficiency CAP updates
>   9. Monthly reports of tracked Performance Indicators

Date Approved (Advice Letter (NTP)): March 2011 (March 2011)

Date Completed (est.): Sep 2012   **Date Completed (actual):** December 2014

Estimated Cost: $279,000   **Final Program Cost:** $3,924,823 ($4,915,380 Budget)

Local Match Contribution: $0

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

Program Budget Unspent: $990,557

Best Practices
• The development of a template for use by participating cities/Tribe provided a strong framework for completion of the individual CAPS.
• One of the most effective tools in educating participating jurisdictions and community stakeholders about the benefits of climate action planning was the use of a model "CO2 bomb", a large model the size of one ton of carbon dioxide. This educational tool was widely used and helped make the concept of greenhouse gas emissions more real and understandable.
• Ongoing support and communication with each city/Tribe as the Climate Action Plans were developed was essential. We worked closely with city staff and various

sustainability committees to tailor the CAP to their needs.

Lessons Learned

- Time spent with jurisdiction staff and city officials to inform them about climate action plans and the benefits of completing a CAP helped smooth the path for eventual adoption of these plans.

- The Climate Action Plans need to identify specific measures and actions in a format that demonstrates not just the kWh savings and GHG reduction, but the return on investment for each measure.

- Careful coordination of data from the GHG Inventories with the CAP GHG reduction measures will help make the CAP goals more trackable as the plans are implemented.

Knowledge Transferred

- Through the Energy Leader Partnership, the Implementer has disseminated Green for Life program information to partners including the Coachella Valley Economic Partnership, Desert Valleys Builders Association, local water districts, and other local governments not served by SCE. We will continue to share information through our Green for Life website, articles in jurisdiction newsletters and websites, outreach events, presentations to community groups, and media/social media outreach.

Next Steps

- Our jurisdictions want a tool they can use to monitor progress toward their GHG reduction goals and track their success as they implement the various measures identified in their Climate Action Plans.

- Work with SCE, SoCalGas, ICLEI, SEEC and member agencies to set up a tool to measure progress and success.

Benefit to the State

- The State will benefit from the municipal EAP/CAP developed through this task by the reduced energy use when the plan is implemented. The EAP/CAP has energy reduction goals and energy reduction strategies that, when implemented, will reduce energy use and GHG emissions. The EAP/CAP is in alignment with California's Long Term Energy Efficiency Strategic Plan, as well as AB 32.

- All Participating Municipalities adopted a Climate Action Plan with aggressive GHG reduction goals, consistent with statewide goals and the California Long Term Energy Efficiency Strategic Plan (CLTEESP).

Benefit to Local Government
• The program was designed to integrate long-term energy efficiency and climate action planning for the Participating Municipality with other elements of the Strategic Plan. We chose a strategy to bring together municipal energy efficiency tasks including benchmarking, commissioning/retro-commissioning, a utility management system, and energy action planning with sustainability programs -- green building and beyond Title 24 tasks as well as greenhouse gas inventories and climate action plans. These tasks were unified as a green government initiative with the Green for Life brand.

Successes
• Implementer developed community Climate Action Plans (CAP) based on the template developed under Strategic Plan Task 4.1.1 for each Participating Municipality.
• Each of the Participating Municipalities passed resolutions adopting the CAP, or otherwise incorporated the CAP into its policies.

Challenges
• Challenges were encountered in data gathering for the GHG inventories and the CAPs.
• A lot of time was spent ensuring that Participating Municipalities were comfortable with the GHG emissions reduction goals in the CAPs.
• A tracking tool wasn't available at the time inventories were done.
• Since the completion of these CAPs, ICLEI released a new version of its climate planning software call ClearPath. Unfortunately, the input files for ClearPath are not compatible with the prior version, thus GHG data will have to be re-entered if ClearPath is used.

5.2.2   County of Inyo – Phase 1

Local Government Partnership: Eastern Sierra Partnership

Project Title: Customize EAP Template with Energy Efficiency Language and Data

Project Purpose: Customize EAP with energy efficiency language and data that will be input into the Partner's CESEAP action plan, which is the Implementers Cost, Energy, and Service Efficiencies Action Plan.

Best Practices/Lessons Learned from Strategic Plan (Draft)

Project Scope and Components: Customize the EAP template with energy efficiency language and data. The outputs of the EAP feed into the Cost, Energy, and Service Efficiencies Action Plan ("CESEAP"). To develop the customized EAP, a comprehensive set of programs will be developed describing customized solutions to encourage reduced energy use and related emissions. These programs will provide basic baseline data for the County and other local governments in their planning efforts. Through this process, draft and final reports will be provided to methodically refine the language.

> **Deliverables:**

1. Report on Status of Consultant or Subcontractor to Support the Task
2. Plan for Customization of a EAP Regional Template
3. Draft EAP
4. Report on Stakeholder Input
5. Final EAP
6. Submit EAP to Implementer's Board of Supervisors for consideration
7. Submit Monthly Status Report

Date Approved (Advice Letter (NTP)): March 2011 (March 2011)

Date Completed (est.): February 2013   **Date Completed (actual):** May 2012

Estimated Cost: $13,966   **Final Program Cost:** $174,795 ($173,028 Budget)

Local Match Contribution: $0

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

Program Budget Unspent: $0

Best Practices
• Early involvement of "working level" facilities staff is valuable in the overall success of the program.
• Community involvement and shared governance is an important aspect in implementing policy changes

Lessons Learned

- Because many County facilities are leased and energy data was not public knowledge, the owners needed to provide the CESEAP team with any information or data required in order to fully analyze the Implementer's usage.

- Political climate and garnering support: the consulting team and SCE team members were not residents of the County. They relied heavily on Staff to provide information on what the "local climate" will support; what the Board of Supervisors is looking for, and what would best fit the County as a whole. It was important to keep the Implementer's own goals for the program at the forefront while also finding a way to meet Strategic Plan goals.

Knowledge Transferred

- This document serves as the primary mechanism of conveying best practices and lessons learned from this task. However, the implementer is available to discuss this further with any interested parties.

Next Steps

- By implementing the Energy Action Plan the Implementer will:

  o Increase energy monitoring and staff awareness.

Benefit to the State

- The State will benefit from this task because the strategies developed for the Participating Municipality will help to meet state Green House Gas (GHG) reduction goals - AB 32 which sets the state adopted target to reduce GHG emissions to 1990 levels by 2020 and the state's long-term goal to reduce emissions 80% below 1990 levels by 2050.

Benefit to Local Government

- The Action Steps chapter outlines specific strategies to decrease energy use.

- Decrease in energy use and costs in Implementer's facilities.

Successes

- The Implementer customized the EAP template developed under Strategic Plan Task 4.1.1 and integrated the EAP into it "Cost, Energy and Service Efficiency Action Plan" (CESEAP). CESEAP outlines the strategies and programs that will guide energy

reduction at Implementer's facilities.

Challenges
• Data Gathering. Acquiring all of the data needed to complete the EAP, Community EAP, and GHG reports was more difficult than originally anticipated.

5.2.3   Kern Council of Governments – Phase 1

Local Government Partnership: Kern County Partnership

Participating Municipalities: California City, Delano, McFarland, Ridgecrest and Tehachapi, and Kern County

Project Title: Establish Municipal Greenhouse Gas Inventories

Project Purpose: Utilize the REAP template developed in SP Task 4.1.1 to develop GHG inventories for facilities of Participating Municipalities that will feed the regional Climate Action Plan Implementer is planning in SP Task 4.1.3.

Project Scope and Components: Implementer will develop GHG inventories that includes information on municipal energy use by Participating Municipalities. The GHG emissions inventory will include calculations of historical GHG emissions from 1990 to 2009 using the best available data and estimates of future emissions to 2020.

> **Deliverables:**

1. Draft Inventory Assessment and Planning Report
2. Final Inventory Assessment and Planning Report
3. Municipal energy use data collection template
4. Results of inventories for all Participating Municipalities
5. Monthly report of tracked Performance Indicators

Date Approved (Advice Letter (NTP)): March 2011 (August 2011)

Date Completed (est.): Nov 2011   **Date Completed (actual):** Sept 2013

Estimated Cost: $368,900   **Final Program Cost:** $1,065,570 ($1,176,000 Budget)

Local Match Contribution: $0

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

Program Budget Unspent: $110,480

Best Practices
• **Development of a detailed implementation plan is critical.** Bundling smaller tasks that can be implemented across a variety of municipal buildings for execution at one time.   • **Review utility bills regularly.** While most jurisdictions meet regularly with their utility account representative to confirm account rate class designation and verify accuracy, the review required to develop the GHG Energy Efficiency Report required cities to develop reasoning for upward or downward swings in usage and to confirm if accounts were correctly assigned. This is a very useful exercise as it draws attention to account and sector level trends and raised questions for city staff to address.

Lessons Learned
• **Anticipate that utility data requests will require substantial lead time.** Coordination with utilities to obtain usage data can be extremely time consuming.   • **Anticipate data collection challenges.** The time required for inventory data collection stretched way beyond original projections because local government staff were not able to respond in a timely manner. For most staff, who are already working in short-staffed departments and for whom collection of GHG inventory data was a task outside their normal responsibilities, finding the time needed to respond to our inquiries was difficult.   • **Design EAP strategies to harmonize with jurisdiction goals and needs.** Several jurisdictions were concerned that adoption of the EAP would tie their hands on future projects, limiting their ability to respond to emergency maintenance needs or to capitalize on utility or other grant and incentive programs, if the EAP strategies were to take precedence. Language was created in the EAP to allay these concerns. Some LGPs opted to "accept" the EAP rather than to "adopt" the document.

Knowledge Transferred
• This document serves as the primary mechanism of conveying best practices and lessons learned from this task. However, the implementer is available to discuss this further with any interested parties.

Next Steps

- The cities of California City, Delano, McFarland, Ridgecrest, Tehachapi, and the County of Kern will continue to pursue Strategic Plan activities through the Kern County Energy Leader Partnership.

Benefit to the State

- The State will benefit from this task because the strategies developed for the Participating Municipality will help to meet state Green House Gas (GHG) reduction goals - AB 32 which sets the state adopted target to reduce GHG emissions to 1990 levels by 2020 and the state's long-term goal to reduce emissions 80% below 1990 levels by 2050.

Benefit to Local Government

- The local governments benefit from this task because the strategies developed for the Participating Municipality will help to meet state Green House Gas (GHG) reduction goals - AB 32 which sets the state adopted target to reduce GHG emissions to 1990 levels by 2020 and the state's long-term goal to reduce emissions 80% below 1990 levels by 2050. Each municipality received an energy action plan.

Successes

- Following the ICLEI Local Government Operations Protocol (LGOP), Kern COG and its project team collected inventory data from departments, obtained usage data from utilities, conducted 34 facility audits to gather detailed facility data for inventory, and established accounts in the US EPA Portfolio Manager program to collect data.

- Results of the inventories were shared with the Participating Municipalities and Kern COG and offered to SCE for review.

- Six Energy Action Plans for the Participating Municipalities were completed with energy efficiency language and data.

Challenges

- The time required for inventory data collection stretched way beyond original projections because local government staff were not able to respond in a timely manner. For most staff, who are already working in short-staffed departments and for whom collection of GHG inventory data was a task outside their normal responsibilities, finding the time needed to respond to our inquiries was difficult.

- Several jurisdictions were concerned that adoption of the EAP would tie their hands on future projects, limiting their ability to respond to emergency maintenance needs or to capitalize on utility or other grant and incentive programs, if the EAP strategies were to

> take precedence. Language was created in the EAP to allay these concerns. Some LGPs opted to "accept" the EAP rather than to "adopt" the document.

5.2.4   City of Moreno Valley – Phase 1

Local Government Partnership: Community Energy Partnership

Project Title: Develop an Energy Efficiency Action Plan Chapter (EEAP) of a Moreno Valley's Climate Action Plan (a community CAP)

Project Purpose: Implementer will present a completed EEAP of the CAP for Implementer to consider for adoption. The plan will establish principles for growth and quality of development, delineating the balance between short and longer-term economics. To be specific: the Implementer will define the degree to which enhanced energy efficiency is warranted in light of specific marginal costs. The plan will identify and promote energy efficiency measures that can be implemented by the city, residents, and businesses and be applied on a community-wide basis.

Project Scope and Components: Implementer will develop an EEAP that will be incorporated into the CAP for the Implementer. The EEAP will include strategies for achieving energy efficiency goals outlined in the plan, as well as an assessment of the potential for long term sustainable changes in behavior and operations dealing with other key resources like water, clean air, and land use.

> **Deliverables:**

1. Report on Status of Implementer or Subcontractor to Support the Task
2. Assessment and Planning Report for the Development of EEAP of the CAP
3. Draft EEAP of the CAP prepared and submitted to the Planning Commission for comment and recommendations
4. Final EEAP of the CAP submitted to City Council for approval; if adopted, provide written EEAP and evidence it was adopted by the local government and effective date; if not adopted; provide reasons and alternative plans
5. Report on Stakeholder Input
6. Monthly reports of tracked Performance Indicators.

Date Approved (Advice Letter (NTP)): March 2011 (April 2011)

Best Practices/Lessons Learned from Strategic Plan (Draft)

2010-2012 Final Report

Date Completed (est.): November 2012   **Date Completed (actual):** June 2013

Estimated Cost: $58,394   **Final Program Cost:** $365,379 ($375,513 Budget)

Local Match Contribution: $0

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

Program Budget Unspent: $10,134

Best Practices
• Had funding to develop an EAP/CAP for the Implementer to promote energy efficiency and reduce GHG emissions.

Lessons Learned
• City Council and Planning Commission were supportive.
• The different City Departments and Divisions came together to create our own EAP/CAP.
• Researched other cities, such as San Carlos, and learned from what other cities did.
• The Implementer explored what the Implementer is currently doing to be energy efficient and came up with potential future policy that could help with energy efficiency.
• Establishing an EAP/CAP is a team effort.

Knowledge Transferred
• Shared with neighboring cities and Western Riverside Council of Governments in a workshop held in June 2013.

Next Steps
• As funding becomes available implement items in the EAP/CAP.

Benefit to the State
• The Implementer is adopting language from the EE/CAP into the General Plan through the 2013-2014 LGP Strategic Plan Pilot Program.
• The GHG analysis identifies a number of current existing efforts and potential efforts

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that would not involve any changes in current policy or ordinances.

Benefit to Local Government
• The Implementer is adopting language from the EE-CAP into the General Plan through the 2013-2014 LGP Strategic Plan Pilot Program.   • The GHG analysis identifies a number of current existing efforts and potential efforts that would not involve any changes in current policy or ordinances.

Successes
• The Implementer developed an Energy Action Plan (EAP) that demonstrates the Implementer's commitment to achieve energy savings and establish long term energy efficiency goals.   • The EAP includes potential programs and policies to reduce overall energy use, increase the use of renewable energy, and identify the life cycle costs of future projects. Life cycle cost looks at the full cost of projects including initial construction and long term maintenance to assess the feasibility of energy efficiency upgrades balancing higher upfront costs with lower operational costs.   • The EAP prioritizes implementation of programs, policies, and projects based upon energy efficiency, cost efficiency and potential resources.   • The Climate Action Strategy was reviewed and approved by City Council in October 2012.

Challenges
• No significant challenges were encountered in this task.

5.2.5   City of Oxnard – Phase 1

Local Government Partnership: Ventura Partnership

Project Title: Develop a Community Climate Action Plan

Project Purpose: Develop the Energy Efficiency Chapter of Implementer's Community Climate Action Plan. This chapter will identify and prioritize all feasible energy efficiency activities in our community. This chapter:

- Recognizes energy efficiency as a high-priority energy resource;

- Makes a strong, long-term commitment to implement cost-effective energy efficiency as a resource;

- Broadly communicates the benefits of and opportunities for energy efficiency;

- Provides for sufficient, timely, and stable program funding to deliver energy efficiency where cost-effective; and

- Modifies policies to align utility Incentives with the delivery of cost-effective energy efficiency.

Project Scope and Components: Implementer will develop a community EE CAP and facilitate its adoption. The EE CAP will promote climate action as a way to achieve substantial and sustained progress toward EE technologies and practices, and will integrate climate action planning and EE efforts to ensure consistent and mutually supportive goals, policies, and actions. The EE CAP will include a comprehensive review of community-wide EE opportunities and an assessment of how the Implementer can help reduce community-wide greenhouse gas emissions primarily through improved EE.

Deliverables:

1. RFP for EE CAP development, as required

2. Documentation of selection of Subcontractor for EE CAP development, as required

3. Draft EE CAP Assessment and Planning Report

4. Final EE CAP Assessment and Planning Report

5. Draft EE CAP

6. Final EE CAP

7. Report on EE CAP Stakeholder Input

8. Resolution adopting EE CAP by Implementer or documentation of why EE CAP was not adopted and related alternate plans

9. Draft plan to share EE CAP documents, best practices and lessons learned with other local governments

10. Final plan to share EE CAP documents best practices and lessons learned with other local governments

11. Monthly report of tracked Performance Indicators

Date Approved (Advice Letter (NTP)): March 2011 (May 2011)

Date Completed (est.): June 2012   **Date Completed (actual):** December 2013

Best Practices/Lessons Learned from Strategic Plan (Draft)

2010-2012 Final Report

Estimated Cost: $200,000   **Final Program Cost:** $275,273 ($275,000 Budget)

Local Match Contribution: $0

Project Reimbursed for LG Staff Time: Ⓨ / N

Program Budget Unspent: $0

Best Practices

• Community outreach was a critical component to the development of the EAP. The Implementer employed multiple engagement strategies that targeted major stakeholder groups and all sectors of the Implementer community, including traditionally underrepresented or underserved groups. The stakeholder engagement process included a mix of meetings, workshops, access to a project web site, social media, and other electronic communications to create awareness, involvement and interaction.
 	
• During the EAP process, the Implementer also leveraged its ability to outreach to the community more efficiently by partnering with community resources such as the Ventura County Regional Energy Alliance (VCREA) and the Inter-Neighborhood Council Forum (INCF). VCREA held a presentation on Residential Energy Awareness and Efficiency at the City's INCF meeting in November, 2012. The INCF was comprised of the chairpersons from the individual neighborhood councils, and VCREA extended an invitation to make presentations at the individual neighborhood councils.
 	
• The Implementer followed the following process in developing the Community Energy Action Plan:
 	
    o Establish 2005 Baseline and 2020 Future Projections of Energy Consumption and Associated GHGs.
    o Develop Energy Reduction and Renewable Energy Programs.
    o Develop Energy Reduction Target.
    o Identify Implementation Steps.
    o Conduct Outreach and Stakeholder Engagement.
 	
With these five tasks, the Implementer developed an EAP designed to lead the community with realistic programs to increase energy efficiency and conservation and encourage renewable energy production. The Implementer seeks to engage community residents and businesses in a dialogue that motivates everyone to achieve energy savings and reduce their long-term energy costs and help the Implementer achieve its energy use reduction target.

Lessons Learned
• While the Implementer believes it did an excellent job in its choice of multiple ways to

reach the community, it also realizes that Implementer's residents are bombarded with information from a variety of sources on a daily basis. In the future, the Implementer may desire to differentiate itself by making information dissemination more interactive and comprehensive through electronic and social media measures.

- The public was not necessarily interested in policy as much as they were its financial implications to them. They wanted to know how energy efficiency could impact their monthly budget. Therefore the Implementer may desire to partner with SCE in the future to deliver more targeted, specific information to its residents about cost savings available to them through energy efficiency measures.

- The Implementer may also consider expanding outreach to include incentives offered by a variety of investor owned utilities in order to increase participation.

- Consider contingencies, where possible, when constructing due dates for important milestones.

Knowledge Transferred

- The Implementer employed multiple engagement strategies that targeted major stakeholder groups and all sectors of the Implementer's community, including traditionally underrepresented or underserved groups. Methods for community outreach included the following:

  - Workshops: Two public workshops were dedicated to gathering stakeholder input and providing outreach and education. These workshops were designed to provide information and take input in a general manner (community-wide), as well as focus on specific stakeholder groups (e.g., development interests, local business community, apartment owners, residents). As a result, format for the workshops included both a general session, as well as "breakout" sessions for specific groups or topic areas. Spanish translation was provided at these workshops as needed.

  - Leading up to each workshop, workshop announcements targeting various stakeholder groups were distributed by the Implementer, such as:

    - Community-wide announcements for the Implementer's web site, project website, and mailing citywide (e.g., Implementer newsletter, utility bill);

    - Press releases to local English and Spanish media announcing the workshops;

    - Invitation letter to Chamber of Commerce and other local business-oriented groups; and

    - Invitation letter to local building industry association.

  - A dedicated Community EAP website linked to the Implementer's web site acted as a central clearinghouse for project information, gathering stakeholder input, and provided useful information on local programs, incentives, workshops, etc. It also linked to valuable interactive tools or web site such as

the CPUC's Engage 360 program.

- o Social networking tools and electronic communication were also used, including text messaging, Facebook, and Twitter, as well as Citywatch television.

- o Flyers were handed out at Earth Day and the Strawberry Festival, and distributed through the neighborhood council packets.

- o Presentations occurred at the Planning Commission Meeting and City Council Meeting. During the EAP process, the Implementer also leveraged its ability to outreach to the community more efficiently by partnering with community resources such as the Ventura County Regional Energy Alliance (VCREA) and the Inter-Neighborhood Council Forum (INCF). VCREA held a presentation on Residential Energy Awareness and Efficiency at the Implementer's INCF meeting in November, 2012. The INCF was comprised of the chairpersons from the individual neighborhood councils.

Next Steps

- Budget constraints make it difficult to implement municipal energy efficiency programs and to sustain long term energy usage best practices. To address this situation we will:

  - o Continue to present energy efficiency opportunities to decision-makers.

  - o Search for creative or new financing and/or funding.

  - o Consider cost-effective and free energy saving measures.

Benefit to the State

- The Implementer is better able to identify targeted areas for energy efficiency and partner with the utilities to reduce energy usage.

Benefit to Local Government

- From the development of the community EAP the city is able to better leverage EE opportunities in partnership with the utilities and local organizations to better serve its constituents and reduce energy usage.

Successes

- The Implementer completed the "City Government and Community Energy Action Plan" (the "EAP"). The EAP was incorporated into the development of the Implementer's Climate Action and Adaptation Plan (CAAP) which will incorporate the

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> EAP energy baseline information and GHG reduction strategies. It represents an important component of a long term strategy to address climate change at a local level.
>
> - City Council approved the EAP in June 2013.

Challenges
• The public was not necessarily interested in policy as much as they were its financial implications to them. They wanted to know how energy efficiency could impact their monthly budget. Therefore, the Implementer may desire to partner with SCE in the future to deliver more targeted, specific information to its residents about cost savings available to them through energy efficiency measures.

5.2.6   City of Santa Ana – Phase 1

Local Government Partnership: Santa Ana Partnership

Project Title: Develop and Adopt an Energy Efficiency Chapter in a Climate Action Plan for Both the Community and Municipal Operations

Project Purpose: Develop a comprehensive strategy and an integrated approach to reducing energy usage and greenhouse gas emissions. The development of this strategy will result in a coordinated approach to planning and implementing energy efficiency and climate protection activities, greater internal expertise, and more awareness and compliance from the public.

Project Scope and Components: Develop and Adopt an Energy Efficiency Chapter in a Climate Action Plan for Both the Community and Municipal Operations: Implementer will develop an energy efficiency chapter in a climate action plan including proposed GHG reductions, energy efficiency related GHG mitigation measures, and the resulting energy savings from meeting the proposed GHG reductions. The energy efficiency chapter will also include the energy efficiency component of the GHG forecast.

Deliverables:

1. Assessment and planning report for the development of an energy efficiency chapter in the climate action plan for the Community and Municipal Operations

2. Draft energy efficiency chapter for the climate action plan for the Community and Municipal Operations

3. Report on stakeholder input

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4. Final energy efficiency chapter for the climate action plan for the Community and Municipal Operations

5. Monitoring Framework for the energy efficiency chapter in a climate action plan

Date Approved (Advice Letter (NTP)): March 2011 (August 2011)

Date Completed (est.): September 2012   **Date Completed (actual):** December 2014

Estimated Cost: $247,498   **Final Program Cost:** $574,043 ($729,928 Budget)

Local Match Contribution: $0

Project Reimbursed for LG Staff Time: Y / N

Program Budget Unspent: $155,885

Best Practices
• Partnering with community organizations and hosting workshops for stakeholder input allowed for more comprehensive input into the plan.
• Inclusion of additional stakeholders allowed for the formation of additional partnerships that can be leveraged as the plan moves towards implementation.

Lessons Learned
• ICLEI's Clean Air & Climate Protection (CACP) software used Master Data Workbooks that provided a central file for storing all documents, emissions factors, and files related to community and municipal inventories.
• Matrix of Measures. Identified and analyzed the GHG emissions resulting from specific actions/measures. The measures were categorized according to mandate, incentivized, voluntary, cost, ease of implementation, and GHG emissions reduction.
• Public Meetings. Community and Stakeholder meetings were held to receive feedback on the process and measures. The public could also go to the CAP webpage and take an on-line survey to provide input.
• Circulation Element. The Implementer's Circulation Element was reviewed for consistency with the energy measures and CAP. The CAP EIR was coordinated with the timing of the Circulation Element EIR. It was later decided to prepare a Negative Declaration.
• The measures in the Energy Efficiency Chapter were developed with input from Staff, public engagement sessions, and through review of climate action plans of other cities in the region. A key requirement was that the measures collectively bring the

> Implementer to the emissions reduction goals of 15% by 2020 and 30% by 2035.

Knowledge Transferred

- All documents developed as a result of this strategic plan work are publically available along with the city's development of CalGreen and LEED Certification Training

- The Implementer has met with numerous other municipalities through various forums to share the lessons learned throughout the process.

Next Steps

- Developed a Demand Response Plan and Event Curtailment Plan.

- Proposal for green building code for new municipal buildings being formulated.

- Initiated and completed a variety of energy efficiency projects on municipal facilities using municipal Direct Install, and on-bill financing (OBF) through SCE and SCG.

- Expand green purchasing that focuses on purchasing products and services that have positive energy and environmental attributes. Green product procurement can reduce energy use, lower maintenance costs (because energy-efficient products require less-frequent replacement), reduce GHG emissions, and enhance pollution prevention and resource conservation activities.

- Identify programs for community and municipal facilities that will help lower energy use.

- Publish articles in Implementer's Green Newsletter notifying the public of energy efficiency programs.

Benefit to the State

- The development and adoption of the city's climate action plan will help reduce the city's energy usage for both electricity and gas and has allowed the city to develop goals for further reduction of energy usage and GHG emissions throughout the city.

Benefit to Local Government

- Implementing programs will provide long-term impacts on energy savings.

- Public awareness will increase participation in energy efficiency programs.

Successes

- Developed and adopted an energy efficiency chapter in a CAP for both community and municipal operations. City Council approved emission reduction targets.

- Energy audits were conducted by SCE and the Southern California Gas Company (SCG) on municipal facilities. Resulting in variable speed drives and boiler replacements.

- Clean Air & Climate Protection (CACP) software was utilized. CACP is an emissions management software program that allows cities the ability to convert activity data into emissions.

Challenges

- There was a change in senior city leadership while the Climate Action Plan was being developed. As a result there was a delay of over a year during the process. Due to the change it took a lot of time to ensure that the new city manager was on board and that the available resources required from the city to complete the project had capacity to contribute.

5.2.7   County of Santa Barbara – Phase 1

Local Government Partnership: South Santa Barbara Partnership

Project Title: Develop the Energy Efficiency Component of the County's Community Climate Action Plan

Project Purpose: Customize Climate Action Plan (CAP) with energy efficiency data and language with concrete policies and measures to achieve GHG emissions reduction that focus on energy efficiency improvements.   The GHG inventory will establish total energy consumption and point the way to reduction opportunities.

Project Scope and Components: Develop the energy efficiency component of its CAP (EE-CAP) to provide a set of measures for how the community can increase their energy efficiency and the EE-CAP will be adopted into the Comprehensive General Plan. The EE-CAP will provide policies that commit the Implementer to developing Reach Codes and increasing the energy efficiency in the community.

    Deliverables:

1. Report on Status of Consultant or Subcontractor to Support the Task
2. Draft EE-CAP

3. Report on Stakeholder Input

4. Final EE-CAP

5. Submit CAP to Board of Supervisors for adoption

6. Monthly reports of tracked Performance Indicators

Date Approved (Advice Letter (NTP)): March 2011 (June 2011)

Date Completed (est.): August 2012   **Date Completed (actual):** May 2015

Estimated Cost: $119,029   **Final Program Cost:** $283,555 ($283,048 Budget)

Local Match Contribution: $0

Project Reimbursed for LG Staff Time: Y / N

Program Budget Unspent: $0

Best Practices
• **Learn from the CAP from other local governments.** When writing the ECAP (Task 3.A, Strategic Plan Task 4.1.2), Planning and Development staff reviewed several other Climate Action Plans from jurisdictions throughout California. For example, staff reviewed Climate Action Plans for the City of Goleta, City of Santa Barbara, City of Los Altos, Butte County, City of Santa Clara, City of South San Francisco, City of Milpitas, County of San Luis Obispo, City of Sunnyvale, and the County of San Mateo. Reviewing these Climate Action Plans helped staff determine the desired look and feel for the ECAP, as well as what types of measures other jurisdictions were implementing.
• The ECAP's existing inventory is a valuable foundation, sets the stage for engagement, and is an ongoing dialogue about the best methods to identify measures and reduce local greenhouse gas emissions. The measures included in the ECAP embrace and reflect current best practices and facilitates future activities to the extent possible. The wording of the measures and actions in the EAP can be updated as needed to reflect current practices.

Lessons Learned
• Ideally, the ECAP would contain solely voluntary measures, as opposed to a mix of voluntary and mandatory measures. However, it is very challenging for counties to write Climate Action Plans without including some mandatory measures.
○ The Implementer's unincorporated area contains an older housing stock that may not be as energy efficient as newer homes that are subject to stricter Title

24, Part 6 and CALGreen requirements. In order to help older homes become more energy efficient, the Implementer's ECAP contains a mandatory measure tied to residential building permits (i.e. an Energy Checklist) that is anticipated to encourage the older housing stock become more energy efficient. Having both mandatory and voluntary, educational measures in the ECAP helps the Plan reach the appropriate reduction in GHGs.

- An important lesson learned while writing the ECAP is that quantifying GHG emission reduction measures (measures) and developing Climate Action Plans is an evolving discipline. There are new methods and ideas that have emerged since preparation of the Implementer's ECAP began in 2012.

Knowledge Transferred

- The Implementer received the following three Beacon Spotlight Awards from the Institute of Local Government and the California State Association of Counties:

  o Silver Level for Agency Greenhouse Gas Reductions for lowering County facility greenhouse gas emissions by 5.8% since 2008.

  o Silver Level for Agency Energy Savings for reducing Implementer facility energy use by 8.6% since 2008.

  o Platinum Level for the Beacon Spotlight Award for reducing greenhouse gas emissions and saving energy, adopting policies and programs to address climate change, and promoting sustainability.

Next Steps

- The County of Santa Barbara pursued the following tasks for Phase 2 of the 2010-2012 Strategic Solicitation Pilot:

  o Benchmarking Policies

  o Utility Manager Program

  o Energy Action Plan/Climate Action Plan

  o Commissioning/Retro-commissioning Policy

- The County of Santa Barbara pursued the following tasks for the 2013-2014 Strategic Solicitation Pilot:

  o Green Building Code

  o Energy Efficiency Revolving Fund

Benefit to the State

- The State will benefit from this task because the strategies developed for the

Participating Municipality will help to meet state Green House Gas (GHG) reduction goals - AB 32 which sets the state adopted target to reduce GHG emissions to 1990 levels by 2020 and the state's long-term goal to reduce emissions 80% below 1990 levels by 2050.

Benefit to Local Government

- The County of Santa Barbara will benefit from the development a community Energy and Climate Action Plan (ECAP) and a municipal Energy Action Plan (EAP) that were written to include customized energy efficiency language and data. This document sets the future framework for energy and climate policies in the County.

Successes

- Developed a community Energy and Climate Action Plan (ECAP) and a municipal Energy Action Plan (EAP) that were written to include customized energy efficiency language and data.

- In order to achieve the community-wide greenhouse gas ("GHG") emissions reductions necessary to meet the Implementer's greenhouse gas reduction target, a suite of emissions reduction measures have been identified across multiple sectors. Specifically, these measures include items such as:

  o Energy Efficiency Education and Outreach,

  o Energy-Efficient Renovations,

  o Green Business Participation,

  o Energy Scoring and Audits,

  o Smart Grid Technology,

  o Energy Efficiency and Green Building Standards,

  o Efficient Building Design,

  o Energy Code Training,

  o Alternative Energy Development, and

  o Efficient Equipment Incentives.

  Energy efficiency touches all aspects of the plan, including agriculture and water efficiency.

- The Board of Supervisors adopted the ECAP through Resolution No. 15-143 in May 2015.

Challenges

> - There was little support to implement the five mandatory measures. There was especially little support for point of sale energy audits.
>   - o Staff worked with stakeholders, Implementer departments, and interested parties to refocus the measures on those that are easily achievable, that incorporate existing Implementer initiatives, and that are the most cost-effective.
>   - o Most of the emission reduction measures are now voluntary and aim to incentivize the community to implement energy and GHG reduction measures through education and outreach.

5.3 Strategic Plan Task 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.

5.3.1 County of Inyo – Phase 1

Local Government Partnership: Eastern Sierra Partnership

Project Title: Customize or Update General Plan/Conservation Element with Climate Policies. Provide Energy Efficiency Framework and Data

Project Purpose: Update the General Plan/Conservation Element with Climate policies. Provide energy efficiency framework and data for other entities doing planning under the CESEAP framework, which will, among other sustainability elements, define the Implementer's energy efficiency.

Project Scope and Components: Develop Implementer's Cost, Energy, and Service Efficiencies Action Plan (CESEAP), incorporating inventories, policy development, and programs to track Implementer's energy use. CESEAP will provide information to update the General Plan/Conservation Element with climate policies and provide the energy efficiency framework and data for other entities doing planning under the CESEAP framework. The final report will provide recommendations for updated language in the Implementer's General Plan, as well as a detailed energy efficiency framework and extensive data for other people doing planning in the County.

Deliverables:

1. Report on Status of Consultant or Subcontractor to Support the Task

2. Draft CESEAP, Conduct and Report on Public Review

3. Final CESEAP Report

4. Updated General Plan with Climate policies

5. Submit to Implementer's Board of Supervisors for conceptual review and authorization to proceed with General Plan update requirements

6. Submit Monthly Status reports

7. Report on Dissemination of Lessons Learned/Best Practices to Other Municipalities

Date Approved (Advice Letter (NTP)): March 2011 (March 2011)

Date Completed (est.): February 2013   **Date Completed (actual):** June 2014

Estimated Cost: $20,616   **Final Program Cost:** $174,795 ($173,028 Budget)

Local Match Contribution: $0

Project Reimbursed for LG Staff Time: Y / N

Program Budget Unspent: $0

Best Practices
• Early involvement of "working level" facilities staff is valuable in the overall success of the program.
• Community involvement and shared governance is an important aspect in implementing policy changes

Lessons Learned
• Because many County facilities are leased and energy data was not public knowledge, the owners needed to provide the CESEAP team with any information or data required in order to fully analyze the Implementer's usage.
• Political climate and garnering support: the consulting team and SCE team members were not residents of the County. They relied heavily on Staff to provide information on what the "local climate" will support; what the Board of Supervisors is looking for, and what would best fit the County as a whole. It was important to keep the Implementer's own goals for the program at the forefront while also finding a way to meet Strategic Plan goals.

Knowledge Transferred

- This document serves as the primary mechanism of conveying best practices and lessons learned from this task. However, the implementer is available to discuss this further with any interested parties.

Next Steps

- The Implementer will develop a revolving energy efficiency fund to provide funding for energy efficiency projects through the 2013-2014 LGP Strategic Plan Pilot Program.

Benefit to the State

- The State will benefit from this task because the strategies developed for the Participating Municipality will help to meet state Green House Gas (GHG) reduction goals - AB 32 which sets the state adopted target to reduce GHG emissions to 1990 levels by 2020 and the state's long-term goal to reduce emissions 80% below 1990 levels by 2050.

Benefit to Local Government

- Increased awareness of energy efficiency strategy and potential reduction in consumption.

Successes

- The Implementer's staff developed draft policy ideas and took them out to the public found that the attending public was in favor of the Implementer including the policies for Implementer's facilities that were developed during the CESEAP and for incentive and recognition programs for private property owners who voluntarily exceed Title 24 standards.

- Staff developed a new Energy Efficiency Chapter to be included in the Conservation and Open Space Element of the General Plan.

- The Board of Supervisors adopted a resolution that amended the General Plan with the Energy Efficiency Chapter in June 2014.

Challenges

- There were no significant challenges during this task.

5.3.2   Kern Council of Governments – Phase 1

Local Government Partnership: Kern County Partnership

Participating Municipalities: California City, Delano, McFarland, Ridgecrest, Tehachapi, and Kern County

Project Title: Develop and Adopt Municipal Energy Action Plans

Project Purpose: Facilitate the adoption of the EAPs developed in 4.1.2 by each Participating Municipality.

Project Scope and Components: Implementer will develop and facilitate adoption of an EAP for each Participating Municipality. EAPs will be based on the REAP Template created in SP Task 4.1.1. Implementer will conduct public workshops for each Participating Municipality to gather input for the EAP and how it should be tailored for each Participating Municipality. Using this input Implementer will develop an EAP for each Participating Municipality for staff review, and ultimately for adoption by each Participating Municipality. The EAPs will set policies and procedures for the implementation of energy efficiency practices and will identify actions to be taken by respective Participating Municipalities to achieve their energy efficiency goals.

   Deliverables:

1. Draft EAP Plan
2. Final EAP Plan
3. Public Workshops on customization of EAPs
4. Draft EAP for each Participating Municipality
5. Final EAP for each Participating Municipality
6. Report on EAP Stakeholder Input
7. For all Participating Municipalities - resolutions adopting EAP or documentation of why EAP was not adopted and related alternate plans
8. Monthly report of tracked Performance

Date Approved (Advice Letter (NTP)): March 2011 (August 2011)

Date Completed (est.): Oct 2012   **Date Completed (actual):** Sept 2013

Estimated Cost: $468,430   **Final Program Cost:** $1,065,570 ($1,176,000 Budget)

Local Match Contribution: $0

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

Program Budget Unspent: $110,480

Best Practices
• **In order for the EAP to be an effective tool, it must be perceived as a living document with a shared vision.** Even over the relatively short duration of this project, there were significant changes in State policy, utility programs, and SCE's objectives related to the project.

Lessons Learned
• **It is key that one person in a position of authority take responsibility for the implementation of the strategies identified in the EAP.** It would also be helpful if an individual were identified to lead future EAP updates. As the economy improves and additional resources become available, greater forward momentum to implement energy conservation and yield cost savings may occur within each jurisdiction. Encouraging ongoing interaction with the EAP during city staff meetings, tasking individual staff with specific "To Do's" and bringing the measures and implementation barriers to the attention of elected officials would serve the community well in becoming energy efficient. Assigning a 'lead' for the region could allow for increased opportunity to influence decision makers to provide or to pursue more energy efficiency project resources for County communities.

Knowledge Transferred
• This document serves as the primary mechanism of conveying best practices and lessons learned from this task. However, the implementer is available to discuss this further with any interested parties.

Next Steps
• Each Participating Municipality will determine how it will integrate the strategies and policies from their Energy Action Plan into their General Plan/Conservation Element when the General Plan update takes place.

Benefit to the State
• The State will benefit from this task because the strategies developed for the Participating Municipality will help to meet state Green House Gas (GHG) reduction

goals - AB 32 which sets the state adopted target to reduce GHG emissions to 1990 levels by 2020 and the state's long-term goal to reduce emissions 80% below 1990 levels by 2050.

Benefit to Local Government

- **Build Staff Resources.** Many staff members of the Participating Municipalities were engaged in the REAP project at various phases, including inventory, strategy selection, and implementation. The process created a framework and data for other people doing planning, creating a pool of staff resources that can further push through the tasks to integrate the energy efficiency strategies from the EAPs into the General Plan.

Successes

- Implementer developed an Energy Action Plan (EAP) for each Participating Municipality. These EAPs demonstrate the commitment the Participating Municipalities have established for creating and implementing energy efficiency goals and policies affecting local government operations. The City Council for each Participating Municipality adopted or accepted the EAP.
- Some Local Governments indicate that the EAPs will inform future General Plans or Climate Action Plans.

Challenges

- Priorities that Local Governments face when adopting policies and plans must be considered when incorporating energy efficiency language into the General Plan or adopting the Energy Action Plan.

  o Some public works managers and city managers expressed concerns that the EAP strategies would have to be given precedence when emergency maintenance becomes necessary in the future.

  o Alternate language helped resolve the issue in some cases.

  o Some Participating Municipalities "accepted" the EAP rather than "adopted" making the language less binding in the case of emergencies or other areas of conflicting priorities.

5.3.3   County of Santa Barbara – Phase 1

Local Government Partnership: South Santa Barbara Partnership

Project Title: Amend the Energy Element of the Comprehensive General Plan to Include the Climate Action Plan

Project Purpose: Update the General Plan/Conservation Element with energy policies and provides an energy efficiency framework that ensures GHG emission reductions.

Project Scope and Components: Develop a customized energy efficiency component of its CAP and Amend the Energy Element of the Comprehensive General Plan to include the CAP. Concurrent with the adoption of the Energy and Climate Action Plan, the Implementer will amend its Comprehensive Plan to reflect the implementer's intent to reduce GHG emissions that are linked to the County's land use decisions. The Comprehensive Plan amendment amends the Energy Element to include a new Policy 8.3 and Research Action 8.3.1 requiring implementation of the ECAP, with provisions for monitoring and updating at least every five years. Together, these amendments identify a path to integrate ECAP objectives into the implementer's long-term planning framework. The proposed policy and research actions for the Comprehensive Plan are as follows:

- Policy 8.3: ECAP Implementation: The Implementer shall implement the Energy and Climate Action Plan (ECAP) to reduce greenhouse gas (GHG) emissions from community-wide sources by a minimum of 15% from the 2007 baseline emissions by 2020.

- Research 8.3.1: Established in the ECAP, the Implementer shall monitor progress towards achieving GHG reductions every five years. Monitoring of the implementer's ECAP shall include an update to the GHG emissions from community-wide sources. If it is determined that the ECAP is not achieving specified levels of GHG emission reductions, the ECAP will be updated as needed.

   Deliverables:

1. Report on Status of Consultant or Subcontractor to Support the Task
2. Updated General Plan with Climate policies
3. Submit Updated General Plan Board of Supervisors for adoption
4. Report on Dissemination of Lessons Learned/Best Practices to Other Municipalities

Date Approved (Advice Letter (NTP)): March 2011 (June 2011)

Date Completed (est.): September 2012   **Date Completed (actual):** May 2015

Estimated Cost: $10,778   **Final Program Cost:** $283,555 ($283,048 Budget)

Local Match Contribution: $0

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

Program Budget Unspent: $0

Best Practices
• A policy and research action were incorporated into the Energy Element instead of the entire ECAP. This allows the ECAP to be amended as needed without having to amend the Energy Element.

Lessons Learned
• An important lesson learned while writing the ECAP is that quantifying greenhouse gas emission reduction measures (measures) and developing Climate Action Plans is an evolving discipline. There are new methods and ideas that have emerged since preparation of the Implementer's ACAP began in 2012. Along the same lines, the original measures for the Implementer's Plan have changed over time.
• Another important lessoned learned is to always engage stakeholders throughout the entire planning process. Stakeholders may be aware of updates to programs as well as new methods and ideas in their area of expertise.

Knowledge Transferred
• The ECAP and updated Comprehensive General Plan will be available on the Planning and Development Department website for use as a model for other jurisdictions. Additionally, the greenhouse gas emission inventory is also available to the public online.

Next Steps

• The County of Santa Barbara pursued the following tasks for Phase 2 of the 2010-2012 Strategic Solicitation Pilot:
      o Benchmarking Policies
      o Utility Manager Program
      o Energy Action Plan/Climate Action Plan
      o Commissioning/Retro-commissioning Policy
 • The County of Santa Barbara pursued the following tasks for the 2013-2014 Strategic Solicitation Pilot:

- o Green Building Code
- o Energy Efficiency Revolving Fund

Benefit to the State

- The State will benefit from this task because the Participating Municipality's General Plan will be updated with energy efficiency language. This is consistent with the California Long Term Energy Efficiency Strategic Plan (CLTEESP).

Benefit to Local Government

- The Participating Municipality's General Plan will be updated with energy efficiency language. These amendments identify a path to integrate ECAP objectives into the Implementer's long-term planning framework. This is consistent with the California Long Term Energy Efficiency Strategic Plan (CLTEESP).

Successes

- The ECAP supports the Implementer's Comprehensive Plan. The measures described in the ECAP are consistent with the policy provisions contained in the Comprehensive Plan.

- Concurrent with the adoption of the ECAP, the Implementer will amend its Comprehensive Plan to reflect the County's intent to reduce GHG emissions that are linked to the Implementer's land use decisions.

- Resolution No. 15-144, the Comprehensive Plan amendment, amends the Energy Element to include a new Policy 8.3 and Research Action 8.3.1 requiring implementation of the ECAP, with provisions for monitoring and updating at least every five years.

- Together, these amendments identify a path to integrate ECAP objectives into the Implementer's long-term planning framework.

Challenges

- Difficult to incorporate the ECAP into the Implementer's Comprehensive Plan Energy Element.
  - o Policy 8.3 and Research Action 8.3.1 were developed to incorporate into the Energy Element to require implementation of the ECAP with provisions for monitoring and updating at least every five years.
  - o A policy and research action will be incorporated into the Energy Element instead of the entire ECAP. This allows the ECAP to be amended as needed

without having to amend the Energy Element.

5.4 Strategic Plan Task 4.1.4 – Community-Wide EE Savings Analysis

Conduct the energy efficiency savings analysis for an annual Greenhouse Gas inventory for the City/ County.

5.4.1 Coachella Valley Association of Governments – Phase 1

Local Government Partnership: Desert Cities Partnership

Participating Municipalities: Blythe, Cathedral City, Desert Hot Springs, Indian Wells, Palm Springs, Rancho Mirage, and the Agua Caliente Band of Cahuilla Indians

Project Title: Annual Greenhouse Gas Inventory

Project Purpose: Conduct an energy savings analysis of GHG Inventories for each Participating Municipality. These results of these analyses will be incorporated into the EE CAP (SP Task 4.1.2) for each Participating Municipality.

Project Scope and Components: The Implementer will develop a greenhouse gas inventory for calendar year 2009, or the calendar year thereafter with best available data, to include information for all Participating Municipalities, ("GHG Inventory"). The GHG Inventory will build on the greenhouse gas inventory developed by the Implementers for the baseline year 2005. The Implementer will collaborate on this effort with ICLEI, and use ICLEI's greenhouse gas inventory software program.

   Deliverables:

1. GHG Inventory Plan
2. Draft GHG Inventory calculations and report for each Participating Municipality
3. Final GHG Inventory calculations and report for each Participating Municipality
4. Draft GHG Inventory update policy
5. Final GHG Inventory update policy
6. Draft GHG Best Practices Report
7. Final GHG Best Practices Report

8. Monthly reports of tracked Performance Indicators

Date Approved (Advice Letter (NTP)): March 2011 (March 2011)

Date Completed (est.): Sep 2012   **Date Completed (actual):** December 2014

Estimated Cost: $371,190   **Final Program Cost:** $3,924,823 ($4,915,380 Budget)

Local Match Contribution: $0

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

Program Budget Unspent: $990,557

Best Practices
• Personal interviews were key to identifying key stakeholders, and the owners of key data.
• Several greenhouse gas emissions specialists were included in our team; their expertise was essential to the successful completion of GHG Inventories. They helped explain the inventory process clearly and simply and provided support for individual jurisdictions.
• Workshops and information sessions were held with participating jurisdictions to introduce them to GHG Inventories, the data needs and the benefits of completing an inventory.

Lessons Learned
• Break down inventories into logical phases instead of starting on all phases in all jurisdictions at the same time.
• Communicate more and more frequently with all the jurisdictions about the benefits of the project, what to expect and when to expect it, deadlines, etc.
• Review all existing inventories in the surrounding region (local, regional, county level).
• Become familiar with various data sources specific to the region, including census data, local Air Quality Management District reports, Local Government organization reports or minutes, local and regional industry publications, etc.
• Understand the underlying protocols used to develop the inventory so the data and methodologies are coordinated and used effectively.
• Draw very specific boundaries (both literal and figurative) for the inventory, to answer the questions: "What's in, what's out?"

- Maintain a spreadsheet tracking all data requests
    - When submitted
    - To whom submitted
    - Date of follow-up
    - Date of received data
    - Date/notation of thank you note
- Gather all pertinent background material, in particular accurate maps of the region including current political boundaries, service areas of utilities, school districts, public transportation, etc.
- Make sure data collection sheet includes or asks for the "unit of measurement," e.g., gallons, miles, hours, etc.
- Create tracking spreadsheet to follow which data has been analyzed, proofed for quality control, entered into the ICLEI's CACP software, outputs verified, and included in graph spreadsheets.

Knowledge Transferred

- Through the Partnership, the Implementer has disseminated Green for Life program information to partners including the Coachella Valley Economic Partnership, Desert Valleys Builders Association, local water districts, and other local governments not served by SCE. We will continue to share information through our Green for Life website, articles in jurisdiction newsletters and websites, outreach events, presentations to community groups, and media/social media outreach.

Next Steps

- Establish a funding mechanism for updates to GHG Inventories.
- Work with ICLEI and ClearPath experts to find the most efficient way to transfer data from our GHG Inventories to be used for CAP tracking.

Benefit to the State

- The development of the energy efficiency analysis of the Implementer's GHG inventory will benefit the State by providing a more in-depth analysis of energy efficiency strategies that can be included in the Implementer's Climate Action Plan or Energy Action Plan. When implemented these strategies will result in reduced energy use and reduced GHG emissions.

Benefit to Local Government
• Most of the participating jurisdictions would not have been able to complete a GHG Inventory without the support of SCE and the CPUC through the Strategic Plan. The inventory was the first for all but one city. • Cities and the Tribe have a baseline from which to measure their progress in GHG reduction.

Successes
• Implementer developed a greenhouse gas (GHG) inventory for each Participating Municipality. Through this effort Implementer: o Implementer evaluated the impact of energy efficiency and sustainability efforts on GHG reduction.   o Prepared update policy for GHG Inventory.   o Established the 2010 baseline for the inventory.   o Complete document data gathering, calculations. Identify GHG baseline.

Challenges
• Data gathering for GHG inventories was very challenging, leading to more time being spent in developing the inventories than originally planned.

5.4.2   City of El Segundo – Phase 1

Local Government Partnership: South Bay Cities Partnership

Project Title: Conduct Energy Savings Analysis for the 2009 Greenhouse Gas Inventory

Project Purpose: Develop estimates of the greenhouse gas reductions and reductions in energy usage realized using 2005 as the baseline. This analysis will inform the development of our energy action plan and/or climate action plan.

Project Scope and Components: Conduct the Energy Savings Analysis for the 2009 Greenhouse Gas Inventory: Implementer will conduct the energy savings analysis for the 2009 greenhouse gas inventory. Implementer has developed an inventory of greenhouse gases for Implementer's facilities for 2005, and 2007. Implementer will develop estimates of reductions in greenhouse gas and energy usage realized since 2005.

Deliverables:

1. Report on status of Implementer or Subcontractor to support the Task

2. Plan for conducting the energy savings analysis for the 2009 greenhouse gas inventory

3. Reports on the results of the energy savings analysis for the 2009 greenhouse gas inventory

4. Report on training Implementer's staff to conduct the analysis

5. Monthly status report

Date Approved (Advice Letter (NTP)): March 2011 (April 2011)

Date Completed (est.): February 2012   **Date Completed (actual):** June 2013

Estimated Cost: $70,500   **Final Program Cost:** $454,153 (486,500 Budget)

Local Match Contribution: $0

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

Program Budget Unspent: $32,347

Best Practices

• Through the implementation of this task the following best practices were used as a guiding standard.
     o Educating decision makers. With the completion of an inventory and the adoption of an update policy is crucial that key decision makers be educated in how the policy will be implemented and how goals will impact the Implementer.
     o Establish a reporting basis. The Implementer determined to not only include emissions from operations sources but also the community at large.
     o Determine a baseline year. If a baseline year is not chosen in the initial stages and adjustments are made later in the process. This could greatly impact the data collection process and cause additional delays.
 • Use the best available data. Start data collection activities with an initial screening of available data sources. Identify key staff most familiar with the necessary data to assist throughout the project.

Lessons Learned
• **Engage all stakeholders, including external parties such as South Bay Cities COG, at the beginning of the program to gain early buy-in.** Many of the tasks

required intra-departmental and inter-departmental support from staff not previously familiar with the overall goal and intent of the program. This lack of familiarity caused challenges and delays with the implementation of tasks. In the future, the Implementer would invite key staff from various departments to participate in energy management and planning discussions to ensure transparent communication of the Implementer's energy reduction objectives.

Knowledge Transferred

- Through the implementation of this task city staff measured and developed a structure to monitor the city's progress towards reducing municipal and community-wide emissions. And established GHG emissions reduction targets, encouraged energy efficiency, and proactively took actions to combating climate change.

Next Steps

- The Implementer will update the inventory according to the Greenhouse Gas Update Policy. And will continue to research funding sources to developing an accompanying climate action plan to set emissions reduction targets and identity strategies to meet those targets.

Benefit to the State

- Local governments integrating energy efficiency in their municipal operations align with the state's "loading order" of first addressing energy efficiency as California's top priority resources.

Benefit to Local Government

- The Implementer identified recommended emissions and energy efficiency savings targets to be used in its Energy Action Plan.

Successes

- The Implementer completed a greenhouse gas emissions (GHG) inventory with an emphasis on electricity and energy use for local government operations and the community.

Challenges

- Data collection was quite difficult and laborious. It helped that we collaborated with the

> South Bay Cities Council of Governments because we were both able to share information with one another.

5.4.3   City of Goleta – Phase 1

Local Government Partnership: South Santa Barbara Partnership

Project Title: Conduct the Energy Efficiency Savings Analysis for the City Greenhouse Gas Reduction Plan

Project Purpose: Conduct an analysis of the energy efficiency savings the Implementer's Green House Gas inventory. All data gathered and analyzed for this task will be available for the Energy Action Plan of SP Task 3.2.1, and would be made available to regional partners and the Metropolitan Planning Organization (SBCAG) to assist with regional planning efforts to increase sustainability, energy efficiency, and reduce greenhouse gas emissions.

Project Scope and Components: Implementer will conduct energy efficiency savings analysis of municipal facilities and operations for an annual Greenhouse Gas (GHG) inventory as part of the GHG Inventory and Reduction Plan tasks.

Deliverables:

1. Report on Status of Implementer or Subcontractor to Support the Task
2. Plan for Energy Savings Analysis for GHG Inventory
3. Draft Report on the Results of the Energy Efficiency Savings Analysis
4. Final Report on the Results of the energy efficiency Savings Analysis
5. Monthly reports of tracked Performance Indicators

Date Approved (Advice Letter (NTP)): March 2011 (April 2011)

Date Completed (est.): October 2012   **Date Completed (actual):** September 2012

Estimated Cost: $15,178   **Final Program Cost:** $349,290 ($358,370 Budget)

Local Match Contribution: $0

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

Program Budget Unspent: $9,080

Best Practices

- Detailed data for government facilities was collected to inform the energy savings analysis.

- Energy savings potential, estimated project costs, and the likely implementation scenario were included in the analysis.

Lessons Learned

- There are limited energy savings opportunities, due to low HVAC use and the types of buildings the Implementer owns/operates.

Knowledge Transferred

- This document serves as the primary mechanism of conveying best practices and lessons learned from this task. However, the implementer is available to discuss this further with any interested parties.

Next Steps

- The Implementer will develop a neighborhood development floating zone to foster green community development through the 2013-2014 LGP Strategic Plan Pilot Program.

Benefit to the State

- The development of the energy efficiency analysis of the Implementer's GHG inventory will benefit the State by providing a more in-depth analysis of energy efficiency strategies that can be included in the Implementer's Climate Action Plan or Energy Action Plan. When implemented these strategies will result in reduced energy use and reduced GHG emissions.

Benefit to Local Government

- The Local Government will benefit from the development a GHG inventory will benefit the State by providing a more in-depth analysis of energy efficiency strategies that can be included in the Implementer's Climate Action Plan or Energy Action Plan. When implemented these strategies will result in reduced energy use and reduced GHG emissions.

Successes
• The Implementer completed a greenhouse gas (GHG) inventory that was included in the Energy Efficiency Action Plan adopted by the Implementer in September 2012.   • Detailed data for government facilities was collected to inform the energy savings analysis.   • Energy savings potential, estimated project costs, and the likely implementation scenario were included in the analysis.

Challenges
• Limited focus of energy savings opportunities, due to low HVAC use and the types of buildings the Implementer owns/operates.

5.4.4   Kern Council of Governments – Phase 1

Local Government Partnership: Kern County Partnership

Participating Municipalities: California City, Delano, McFarland, Ridgecrest, Tehachapi, and Kern County

Project Title: Conduct Energy Efficiency Savings Analyses for Annual Greenhouse Gas Inventories Following Adoption of EAPs

Project Purpose: Conduct energy savings analysis of Greenhouse Gas inventories of each Participating Municipality following the adoption of Municipal EAPs to determine the impact of the Municipal EAPs one year after the EAP is implemented.

Project Scope and Components: The purpose of this task differed from others under Strategic Plan Task 4.1.4 in that it was intended to evaluate the actions and effectiveness of the Energy Action Plans (EAPs) implemented by each of the Participating Municipalities one year after the EAPs were adopted/accepted. The analysis provided a summary of work completed to date and a summary of progress each Participating Municipality made towards achieving the goals of its EAP.

Implementer will conduct analyses of the GHG inventories developed for each Participating Municipality in SP Task 4.1.2 one-year following adoption of the adopted CAPs (SP Task 4.1.3) to determine the effectiveness of the CAP in improving energy efficiency. A GHG Energy

Efficiency Analysis Plan (Plan) for conducting the analyses will describe the methodology and results to be reported, as well as, address procedures for updating the GHG inventories, including timelines and funding. The energy savings analysis for each PM will be conducted, and with a report of the results for each PM as well as source files and back-up data.

Deliverables:

1. 1.   Draft GHG EE Analysis Plan
2. 2.   Final GHG EE Analysis Plan
3. 3.   Draft GHG EE Analysis Report
4. 4.   Final GHG EE Analysis Report
5. 5.   Draft Information Sharing Plan
6. 6.   Final Information Sharing Plan
7. 7.   Monthly report of tracked Performance Indicators

Date Approved (Advice Letter (NTP)): March 2011 (August 2011)

Date Completed (est.): Oct 2012   **Date Completed (actual):** Mar 2015

Estimated Cost: $58,650   **Final Program Cost:** $1,065,570 ($1,176,000 Budget)

Local Match Contribution: $0

Project Reimbursed for LG Staff Time: Ⓨ / N

Program Budget Unspent: $110,480

Best Practices
• Kern Region Energy Action Plan Summit (Oct. 30, 2013) to share information, best practices, and lessons learned from the Kern REAP project.
• EAP Template is designed to provide a policy framework for decision making regarding efficiency measures that result in the reduction of energy consumption and associated greenhouse gases (GHGs) in a manner consistent with the objectives of the California Public Utilities Commission's (CPUC's) California Long Term Energy Efficiency Strategic Plan (CEESP), and also in a manner consistent with Assembly Bill 32 (AB 32).
• The Cost Benefit Analysis Tool, found in Appendix C, is designed to help jurisdictions develop municipal operations strategies and programs for inclusion in an EAP or Climate Action Plan (CAP). This tool provides a systematic process for comparing the costs and benefits of various measures to improve energy efficiency. It was designed

to be used in conjunction with the Municipal EAP Template, although it can be used independently. The tool is used to select energy measures for a jurisdiction based on local priorities such as ease of implementation, energy reduction or return on investment, and to then estimate the expected costs, savings, and reductions in energy and GHGs from the selected measures.

Lessons Learned

- In small municipalities EAP planning and implementation activities are usually added to existing job duties and responsibilities of staff. Allow for staff turnover at LGs.

- In order for the EAP to be an effective tool, it must be perceived as a living document with a shared vision, accounting for changes in environmental policy, utility programs and economic conditions.

- For a regional effort like REAP, fully develop one EAP for review and comment before proceeding with the rest of the jurisdictions

- Development of a detailed implementation plan is critical

- Structure billing from jurisdictions by project milestone or deliverable to encourage their participation: rather than by time and materials

- Anticipate that utility Data requests will require substantial lead time.

- Review utility bills regularly: The review required to develop the GHG Energy Efficiency Report required cities to develop reasoning for upward or downward swings in usage and to confirm if accounts were correctly assigned. This is a very useful exercise as it draws attention to account and sector level trends and raised questions for city staff to address.

- Design EAP strategies to harmonize with jurisdiction goals and needs.

- Utilities should consider statewide energy efficiency actions

Knowledge Transferred

- This document serves as the primary mechanism of conveying best practices and lessons learned from this task. However, the implementer is available to discuss this further with any interested parties.

Next Steps

- The cities of California City, Delano, McFarland, Ridgecrest, Tehachapi, and the County of Kern will continue to pursue Strategic Plan activities through the Kern County Energy Leader Partnership.

Benefit to the State
• The development of the energy efficiency analysis of the Implementer's GHG inventory will benefit the State by providing a more in-depth analysis of energy efficiency strategies that can be included in the Implementer's Climate Action Plan or Energy Action Plan. When implemented these strategies will result in reduced energy use and reduced GHG emissions.

Benefit to Local Government
• The development of the energy efficiency analysis of the Implementer's GHG inventory will benefit the local governments by providing a more in-depth analysis of energy efficiency strategies that can be included in the Implementer's Climate Action Plan or Energy Action Plan. When implemented these strategies will result in reduced energy use and reduced GHG emissions.

Successes
• Completed the Greenhouse Gas Energy Efficiency Analysis Report in October 2014, updated the Energy Action Plans for each community and provided both documents to each participating local government partner.

Challenges
• Had some difficulties in obtaining metered data from the utility. Issues such as being able to specify the meter location were encountered.

5.4.5   City of Moreno Valley – Phase 1

Local Government Partnership: Community Energy Partnership

Project Title: Develop an Energy Efficiency Analysis for a Green House Gas (GHG) Inventory for a Municipal Climate Action Strategy (CAP)

Project Purpose: Conduct an analysis of the energy efficiency savings of the Implementer's Green House Gas inventory. The results of this analysis will inform the municipal and community Energy Action Plans developed in SP Tasks 3.2.1 and 4.1.1, respectively.

Project Scope and Components: Implementer will develop energy efficiency analysis of municipal facilities operated by the Implementer for inclusion in a GHG inventory.

Implementer will prepare a report of its energy efficiency analysis as part of it GHG inventory for the Implementer. The analysis will included an assessment of a host of measures – focusing on energy efficiency gains – and assign relative values to each.

Deliverables:

1. Report on Status of Implementer or Subcontractor to Support the Task

2. Assessment and Planning Report for the Development Energy Efficiency Analysis GHG Inventory

3. Draft Report of Energy Efficiency Analysis results for GHG inventory submitted to the CPM for comment and recommendations

4. Final Draft Report of Energy Efficiency Analysis results for GHG inventory for Implementer's City Council; if approved, provide written evidence of approval by the local government and effective date; if not approved; provide reasons and alternative plans

5. Report on Stakeholder Input

6. Monthly reports of tracked Performance Indicators.

Date Approved (Advice Letter (NTP)): March 2011 (April 2011)

Date Completed (est.): November 2012   **Date Completed (actual):** March 2014

Estimated Cost: $41,237   **Final Program Cost:** $365,379 ($375,513 Budget)

Local Match Contribution: $0

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

Program Budget Unspent: $10,134

Best Practices
• The GHG Analysis is more of a scientific approach to our Climate Action Strategy.

Lessons Learned
• City Council and Planning Commission were supportive.
• The different City Departments and Divisions came together to create their own Community-Wide energy efficiency saving analysis.
• Researched and contacted other cities, and learned from what other cities did and we

- made it fit Implementer.

- The Implementer explored what the Implementer is currently doing to be energy efficient and came up with potential future policy that could help with energy efficiency.

- Establishing a community-wide energy efficiency saving analysis is a team effort.

Knowledge Transferred

- Shared with neighboring cities and Western Riverside Council of Governments in a workshop held in June 2013.

Next Steps

- As funding becomes available implement Community-Wide EE savings.

Benefit to the State

- The Implementer is adopting energy efficiency language into the General Plan through the 2013-2014 LGP Strategic Plan Pilot Program. By incorporating energy efficiency language into its General Plan the Implementer is affirming its commitment to energy efficiency.

Benefit to Local Government

- The Implementer is adopting language from the EE/CAP into the General Plan through the 2013-2014 LGP Strategic Plan Pilot Program.

- The GHG analysis identifies a number of current existing efforts and potential efforts that would not involve any changes in current policy or ordinances.

Successes

- The GHG Analysis and GHG inventory was completed and was discussed at the Joint Planning Commission/City Council meeting on April 2012.

- A discussion of the GHG analysis has been incorporated into the Implementer's Climate Action Strategy, and approved by the City Council on October 2012.

- The Implementer developed a community greenhouse gas (GHG) inventory and used it as a basis for establishing goals and policies that incorporate environmental responsibility into daily management of key areas of the Implementer's resources and activities, including energy and water use. The energy analysis was presented in a section of energy reduction measures. The GHG inventory and subsequent analyses

> were incorporated into the Implementer's Energy Efficiency Action Plan developed under Strategic Plan Task 4.1.2.

Challenges

- No significant challenges were encountered in this task.

5.4.6   City of Santa Ana – Phase 1

Local Government Partnership: Santa Ana Partnership

Project Title: Develop the Baseline Greenhouse Gas Inventory Including an Energy Savings Analysis of the Baseline GHG for Both the Community and Municipal Operations

Project Purpose: To develop a GHG emissions inventory for communitywide and municipal GHG emissions sources for the 2008 base year. Provide an Energy Savings Analysis that includes information on the electricity-related GHG emissions in Implementer's boundaries for year 2008.

Project Scope and Components: Develop the Baseline Greenhouse Gas Inventory (GHG) Including an Energy Savings Analysis of the Baseline GHG for Both the Community (all properties located within the Implementer's boundaries) and Municipal Operations: Implementer will use both the local government operations protocol and a community wide protocol to help develop the baseline GHG inventory. Implementer will also develop an energy savings analysis based on the baseline GHG inventory for both the Community and Municipal Operations.

Deliverables:

1. Report on status of Implementer or Subcontractor to support the Task

2. Assessment and planning report for conducting the baseline GHG inventory including the energy savings analysis for the baseline GHG for both the Community and Municipal Operations

3. Draft report on the results of the baseline GHG inventory including the energy savings analysis for the baseline GHG for both the Community and Municipal Operations

4. Final report on the results of the baseline GHG inventory including the energy savings analysis for the baseline GHG for both the Community and Municipal Operations

5. Report on dissemination of the baseline GHG inventory and energy savings analysis for the baseline GHG to the Community

6. Monthly Status Reports

Date Approved (Advice Letter (NTP)): March 2011 (August 2011)

Date Completed (est.): February 2012   **Date Completed (actual):** May 2013

Estimated Cost: $201,120   **Final Program Cost:** $574,043 ($729,928 Budget)

Local Match Contribution: $0

Project Reimbursed for LG Staff Time: Ⓨ/ N

Program Budget Unspent: $155,885

Best Practices
• The GHG inventory provided the Implementer with new information and recognition relative to GHG emissions reduction. It was discovered that Implementer already has one of the lowest city per capita emissions. Implementer has 5.5 metric tons CO2 per capita compared to Los Angeles at 13.5 metric tons.
• The Implementer had already put in place numerous measures and programs to reduce GHG emissions since the 2008 baseline year. The program data was accumulated into one document - Report on Emissions Reductions from Existing Measures. By combining Implementer measures with the existing state and federal regulations, Implementer will be at 18% below 2008 baseline by 2020 and 29% below by 2035.

Lessons Learned
• The largest source of municipal emissions was energy consumption within the buildings and facilities sector, which accounted for 35% of all municipal emissions. Applying energy saving technologies will have the largest impact by reducing energy costs, maintenance, and GHG emissions.
• Outreach to the community was built upon existing outreach efforts, to distribute to a widespread, diverse audience. These included the Implementer's Green Newsletter that is delivered to all residents; CAP webpage on the Implementer's website; meetings with members from existing organizations and groups; and meetings inviting all members of the public. Involving as many citizens as possible in the process allowed the Implementer to gain insight and direction on the process and to inform the community and stakeholders about the project.
• Flexibility was needed when developing a GHG inventory. It's not unusual that some data is not available and alternate methods may have to be employed to identify and adjust proxies for the desired data.

Knowledge Transferred

- Throughout various forums with other municipalities the city was able to share the lessons learned and best practices of the program. Specifically the city shared the important of partnering with local organizations to help make an impact towards the goal of community energy efficiency savings and to create partnerships to increase outreach and participation in various energy efficiency programs.

Next Steps

- Facilities Maintenance reviews energy usage monthly and identifies areas of high usage/cost and uses information for improvement planning process.

Benefit to the State

- There is significantly potential in the city for energy efficiency and DR activities with an increased focus and outreach. The state would benefit by supporting the constituents of the Implementer

Benefit to Local Government

- Identify and target high usage Implementer facilities for energy efficiency improvements.

- Implementer promotes education and outreach regarding energy and GHG emissions within the community.

Successes

- Developed the baseline GHG inventory including an energy savings analysis of the baseline GHG for both the community and municipal operations.

- Formed a Steering Committee made up of staff to receive input and direction. Held public and stakeholder outreach meetings to encourage discussion with the community.

- Identified energy efficient and GHG reduction measures in the proposed Circulation Element.

- City Council adopted emission reduction targets.

- The Statewide Energy Efficiency Collaborative (SEEC) ClearPath California tool was utilized to calculate community GHG emissions.

Challenges
• Determining which year to select as the base line year. The selection of baseline year was based on the year the Implementer could collect and retrieve the most data.
o 2008 was selected as the baseline year due to the availability of data. Some GHG emissions data had to be used from other years since 2008 was not available.

Assessment

Project Met Expectations	Yes	In Part	No
Explanation	The Implementer developed a baseline GHG inventory including an energy savings analysis of the baseline GHG for both the community and municipal operations. From these results, the Implementer identified energy efficiency and GHG reduction measures and the City Council adopted emission reduction targets.		

5.4.7   County of Santa Barbara – Phase 1

Local Government Partnership: South Santa Barbara Partnership

Project Title: Conduct the Energy Efficiency savings Analysis for an Annual Greenhouse Gas inventory for the County

Project Purpose: The GHG inventory will establish total energy consumption and point the way to energy reduction opportunities and measures and inform the Climate Action Plan (CAP) developed in SP Task 4.1.2 with energy efficiency data and language with concrete policies and measures to achieve GHG emissions reduction that focus on energy efficiency improvements.

Project Scope and Components: Develop a GHG emissions inventory as a baseline for identifying reduction opportunities for the ECAP. Selection of reduction measures will follow an economic efficiency approach. Measures that produce the greatest reduction at the least cost will be the first priority. A large focus of the inventory will be dedicated to energy efficiency insofar as the AB 32 Scoping Plan identified energy efficiency as one of the four measures that accounts for 75% of GHG emission reductions in the State.

 Deliverables:

Best Practices/Lessons Learned from Strategic Plan (Draft)

1. Report on Status of Consultant or Subcontractor to Support the Task
2. Plan for Energy Savings Analysis for GHG Inventory
3. Draft Report on the Results of the Analysis
4. Final Report on the Results of the Analysis
5. Monthly reports of tracked Performance Indicators

Date Approved (Advice Letter (NTP)): March 2011 (June 2011)

Date Completed (est.): September 2011 **Date Completed (actual):** July 2014

Estimated Cost: $35,085 **Final Program Cost:** $283,555 ($283,048 Budget)

Local Match Contribution: $0

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

Program Budget Unspent: $0

Best Practices
• The Implementer used an existing greenhouse gas (GHG) inventory to conduct an energy savings analysis for measures to be included in the Climate Action Plan. The results of this task were incorporated into the Climate Action Plan.

Lessons Learned
• The ECAP contains a GHG inventory as a baseline for identifying reduction opportunities. The ECAP contains an emissions inventory and forecast, which compares Business-As-Usual and Adjusted Business-As-Usual emissions forecasts. Utilize software that allows for easy updates as this baseline will be used to track progress annually.

Knowledge Transferred
• This document serves as the primary mechanism of conveying best practices and lessons learned from this task. However, the implementer is available to discuss this further with any interested parties.

Next Steps

- The County of Santa Barbara pursued the following tasks for Phase 2 of the 2010-2012 Strategic Solicitation Pilot:
    - Benchmarking Policies
    - Utility Manager Program
    - Energy Action Plan/Climate Action Plan
    - Commissioning/Retro-commissioning Policy
- The County of Santa Barbara pursued the following tasks for the 2013-2014 Strategic Solicitation Pilot:
    - Green Building Code
    - Energy Efficiency Revolving Fund

Benefit to the State

- The development of the energy efficiency analysis of the Implementer's GHG inventory will benefit the State by providing a more in-depth analysis of energy efficiency strategies that can be included in the Implementer's Climate Action Plan or Energy Action Plan. When implemented these strategies will result in reduced energy use and reduced GHG emissions.

Benefit to Local Government

- The development of the energy efficiency analysis of the Implementer's GHG inventory will benefit the local government by providing a more in-depth analysis of energy efficiency strategies that can be included in the Implementer's Climate Action Plan or Energy Action Plan. When implemented these strategies will result in reduced energy use, energy costs and GHG emissions.

Successes

- The Implementer used an existing greenhouse gas (GHG) inventory to conduct an energy savings analysis for measures to be included in the Climate Action Plan. The results of this task were incorporated into the Climate Action Plan prepared under Strategic Plan Task 4.1.2.
- The ECAP contains a GHG inventory as a baseline for identifying reduction opportunities. Chapter III of the ECAP is an emissions inventory and forecast, which compares Business-As-Usual and Adjusted Business-As-Usual emissions forecasts. This baseline will be used to track progress annually.

Challenges
• There were no significant challenges associated with this task.

5.4.8   City of Simi Valley – Phase 2

Local Government Partnership: Simi Valley Partnership

Project Title: Conduct the Energy Savings Analysis for the 2011 Greenhouse Gas Inventory and Develop Greenhouse Gas Inventory Policy

Project Purpose: Develop a policy and conduct energy savings analysis of Implementer's Greenhouse Gas Inventory. The policy will ensure the analysis will be conducted on a regular schedule as stated in the policy.

Project Scope and Components: Conduct the Energy Savings Analysis for the 2011 Greenhouse Gas Inventory: Implementer will conduct the energy savings analysis for the 2011 greenhouse gas inventory. Implementer has developed an inventory of greenhouse gases for Implementer's facilities for 2005, and 2007. Implementer will develop estimates of reductions in greenhouse gas and energy usage realized since 2005.

> **Deliverables:**

1. Report on status of Implementer or Subcontractor to support the Task
2. Assessment and Planning Report for conducting the energy savings analysis for the 2011 greenhouse gas inventory
3. Reports on the results of the energy savings analysis for the 2011 greenhouse gas inventory
4. Draft and final greenhouse gas inventory policy
5. Monthly Status Report

Date Approved (Advice Letter (NTP)): December 2011 (December 2011)

Date Completed (est.): January 2013   **Date Completed (actual):** November 2012

Estimated Cost: $70,500   **Final Program Cost:** $611,356 ($389,500 Budget)

Local Match Contribution: $0

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

Program Budget Unspent: $0

Best Practices
• The Implementer developed a Greenhouse Gas Inventory Policy that established guidance for tracking and preparing regular updates of community-wide GHG emissions. The policy was developed to include step-by-step instructions for updating and reporting emissions.

Lessons Learned
• Implementer was concerned about additional costs that would be incurred for updating GHG inventory. Utilizing a program that makes this easier can help alleviate some of those concerns.

Knowledge Transferred
• This document serves as the primary mechanism of conveying best practices and lessons learned from this task. However, the implementer is available to discuss this further with any interested parties.

Next Steps
• There are no Strategic Plan activities currently planned for the City of Simi Valley. However, Simi Valley will continue to pursue Strategic Plan activities through the Ventura Energy Leader Partnership.

Benefit to the State
• The development of the energy efficiency analysis of the Implementer's GHG inventory will benefit the State by providing a more in-depth analysis of energy efficiency strategies that can be included in the Implementer's Climate Action Plan or Energy Action Plan. When implemented these strategies will result in reduced energy use and reduced GHG emissions.
• The Implementer became a member of the Climate Registry and is using the Registry to report GHG's.

Benefit to Local Government

- City Council approved a GHG Update policy to track progress of emissions reductions.

- Ongoing management and tracking of community and municipal GHG emissions with emphasis on energy.

Successes
• The Implementer developed a greenhouse gas (GHG) inventory for government operations. An analysis of GHG emissions associated with electricity and natural gas used in municipal operations. Trends are measured from 2006 to 2011. Energy use at selected municipal facilities was analyzed for savings potential. • The Implementer developed a Greenhouse Gas Inventory Policy that established guidance for tracking and preparing regular updates of community-wide GHG emissions. The policy was developed to include step-by-step instructions for updating and reporting emissions. The policy was approved by City Council in November 2012. • The Implementer became a member of the Climate Registry and is using the Registry to report GHG's.

Challenges
• Implementer was concerned about additional costs that would be incurred for updating GHG inventory.

5.4.9   City of South Gate – Phase 1

Local Government Partnership: South Gate Partnership

Project Title: Greenhouse Gas Inventory & Greenhouse Gas Inventory Policy

Project Purpose: Develop a policy and conduct energy savings analysis of Implementer's Greenhouse Gas Inventory. The results of this analysis will be used for the Energy Action Plan, as well as be used to track progress Implementer has made in reducing GHG emissions. The policy will ensure the analysis will be conducted on a regular schedule as stated in the policy.

Project Scope and Components: Implementer will conduct an inventory of Implementer GHG ("GHG Inventory") and develop a policy to regulate the frequency of updating the GHG Inventory ("GHG Inventory Policy"). The GHG Inventory will update the baseline GHG data collected in 2005. Implementer will develop a GHG Inventory Policy designed to ensure a yearly inventory of the Implementer's GHG emissions becomes integrated with Implementer's

operations. The Policy will also ensure the creation of an accurate tool that Implementer's staff may use to prioritize municipal retrofit projects and community green programs.

Deliverables:

1. GHG Inventory Assessment & Planning Report
2. Draft GHG Inventory Report
3. Final GHG Inventory Report
4. GHG Inventory Policy Assessment and Planning Report
5. Draft GHG Inventory Policy
6. Final GHG Inventory Policy
7. Report on GHG Inventory Policy Stakeholder Input
8. Resolution adopting the GHG Inventory Policy by Implementer or documentation of why the GHG Inventory Policy was not adopted and alternate plans
9. Contact information for Implementer representative available to present findings
10. Monthly report of tracked Performance Indicators

Date Approved (Advice Letter (NTP)): March 2011 (May 2011)

Date Completed (est.): April 2012   **Date Completed (actual):** December 2012

Estimated Cost: $74,499   **Final Program Cost:** $887,332 ($886,000 Budget)

Local Match Contribution: $0

Project Reimbursed for LG Staff Time: Ⓨ / N

Program Budget Unspent: $0

Best Practices
• Through the implementation of the (Greenhouse Gas Inventory & Greenhouse Gas Inventory Policy) the following best practices were used as a guiding standard.
o Educating decision makers. With the completion of an inventory and the adoption of an update policy is crucial that key decision makers be educated in how the policy will be implemented and how goals will impact the city.
o Establish a reporting basis. The city determined to not only include emissions from operations sources but also the community at large.
o Determine a baseline year. If a baseline year is not chosen in the initial stages

and adjustments are made later in the process. This could greatly impact the data collection process and cause additional delays.

- o Use the best available data. Start data collection activities with an initial screening of available data sources. Identify key staff most familiar with the necessary data to assist throughout the project.

Lessons Learned

- Through implementation of this task the following lessons learned were recognized:

  - o Be prepared for inconsistent and incomplete data. It may require city to be flexible and creative in filling in data gaps. Ensure you have staff most familiar with that specific source be working on the project.

  - o Be persistent. The most time consuming part of developing an inventory is following up on data requests.

- The Implementer learned that an effective energy management strategy requires the tracking of energy usage. Data can help to drive decision and policy making. The Implementer will use utility management software to track the energy usage of all municipal facilities in the future.

- The Implementer learned that there is a significant amount of resources made available through public and private entities. Many of these resources are free to access and can support our sustainable community objectives. The Implementer will utilize these resources (some noted in Section 3.4) to education and train staff on best practices and lessons learned from other local and state government agencies.

Knowledge Transferred

- Through the implementation of this task city staff measured and developed a structure to monitor the city's progress towards reducing municipal and community-wide emissions. And established GHG emissions reduction targets, encouraged energy efficiency, and proactively took actions to combating climate change.

Next Steps

- The city will update the inventory according to the Greenhouse Gas Update Policy. And will continue to research funding sources to developing an accompanying climate action plan to set emissions reduction targets and identity strategies to meet those targets.

Benefit to the State

- Local governments integrating energy efficiency in their municipal operations align

with the state's "loading order" of first addressing energy efficiency as California's top priority resources.

Benefit to Local Government

- The following benefits to the city were identified through the implementation of this task:

    o Completed greenhouse gas inventory to clearly identify a starting point for how to reduce emissions for the city.

    o Completed inventory update policy adopted and supported by key municipal stakeholders and City Council.

    o Contribute to meeting California's commitments to reducing GHG emissions.

Successes

- The GHG Emissions Inventory and Inventory Update Policy and associated GHG reduction targets are expected to result in increased energy efficiency and reduce the energy usage of buildings and facilities throughout the community.

- Developed and adopted a Greenhouse Gas Emissions Inventory Policy that establishes guidelines for updating and reviewing the City's greenhouse gas (GHG) emissions inventory. Regular updates to the emissions inventory will quantify changes in the main sources of emissions, allowing the Implementer to identify opportunities to save energy; evaluate, prioritize, and make informed policy decisions; reduce GHG emissions; track performance overtime; and document results.

- The policy was adopted in October 2012.

Challenges

- The following challenges during the development of the emissions inventory and the update policy were encountered:

    o Not all GHG emissions inventories include the same sectors of emissions and, in many cases, inventories do not present a comprehensive calculation of all relevant emissions. Also, at this time, no formal guidance exists as to which sectors must be included. To the extent possible, important emissions sectors should not be left out as such a practice makes it difficult to compare performance across cities or take credit for a variety of conservation and sustainability activities.

    o Similarly, not all inventories utilize the same data sources for activity data. To the extent possible, cities should strive to use measurable data over statistical data in order to realize more accurate emissions inventories and better

> understand how GHG emissions are being generated in their communities.
>
> o Cities should also use caution when utilizing any comprehensive GHG calculation tool, whether it is ICLEI's CACP software, SEEC's Community Inventory Tool, or another tool. Each tool will use different defaults, provide different levels of accuracy, and report emissions in different formats. Such inconsistencies make it difficult to compare inventories prepared under different methodologies or tools. To the extent possible, cities should use one tool to prepare and update their inventories over time.

5.4.10   County of Ventura – Phase 1

Local Government Partnership: Ventura Partnership

Project Title: Conduct the Energy Efficiency savings and GHG analysis for the County GHG Reduction Plan

Project Purpose: Conduct an analysis of Implementers GHG Inventory that describes:

- How Implementer will meet goals and objectives identified in AB 32;
- Energy usage practices for energy efficiency, sustainability, and climate change used in the analysis;
- Methodologies and emission factors for quantifying direct and indirect emissions; and
- Other information relevant to energy usage and emissions.

Project Scope and Components: Implementer will perform a GHG inventory of energy efficiency savings and GHG analysis of county facilities and operations.

Deliverables:

1. Report on Status of Implementer or Subcontractor to Support the Task
2. Plan for Energy Savings Analysis for GHG Inventory
3. Acquire Software for Tracking and Reporting GHG Inventory Results
4. Complete the GHG Inventory
5. Energy efficiency and GHG Analysis Final Report
6. Energy efficiency and GHG Analysis Final Report
7. Complete Assessment of GHG Inventory and energy efficiency and GHG Emissions

Reduction Analysis

8. Monthly reports of tracked Performance Indicators

Date Approved (Advice Letter (NTP)): March 2011 (May 2011)

Date Completed (est.): Oct 2012   **Date Completed (actual):** Jul 2013

Estimated Cost: $235,000   **Final Program Cost:** $1,001,068 ($1,000,000 Budget)

Local Match Contribution: $0

Project Reimbursed for LG Staff Time: Ⓨ / N

Program Budget Unspent: $0

Best Practices
• By implementing a new facilities management software (FM Systems), it gives you the capability to track, analyze, and manage facilities-related data to ensure optimal performance, strategic utility planning and carbon emission reporting.

Lessons Learned
• Data analysis involving all staff made data analysis easier to review and report.

Knowledge Transferred
• Implementer's facilities will be monitored for overall efficiency and energy efficiency will be better identified

Next Steps
• Continue to update system and all data

Benefit to the State
• The development of the energy efficiency analysis of the Implementer's GHG inventory will benefit the State by providing a more in-depth analysis of energy efficiency strategies that can be included in the Implementer's Climate Action Plan or Energy Action Plan. When implemented these strategies will result in reduced energy

> use and reduced GHG emissions.

Benefit to Local Government
• Using GHG inventory data, the Implementer can monitor and analyze the energy use and CO2e of county facilities and operations and monitor the progress in achieving our goals.
• By implementing a new facilities management software (FM Systems), Implementer's agencies will be able to track, analyze, and manage facilities-related data to ensure optimal performance, strategic utility planning and carbon emission reporting.

Successes
• Conducted an energy efficiency saving analysis for an annual Greenhouse Gas inventory and implementing software to track and report GHG inventory results.
• Acquired and implementing software to track and report GHG inventory results.

Challenges
• The customization of specific modules to meet the Implementer's needs took more time that originally planned for. Full implementation of the system (over 400 facilities) was a much larger task than originally anticipated

5.4.11 Western Riverside Council of Governments – Phase 2

Local Government Partnership: Western Riverside Energy Leader Partnership

Participating Municipalities: Calimesa, Canyon Lake, Hemet, Lake Elsinore, Menifee, Murrieta, Norco, Perris, San Jacinto, Temecula, and Wildomar

Project Title: Task Name: Develop Policies and a Methodology for Conducting Energy Efficiency Savings Analysis that will be incorporated into an Annual Greenhouse Gas Inventory for each Participating Municipality

Project Purpose: Through this task the Implementer will develop a standard methodology for conducting energy savings analysis of GHG inventories for each municipality, thus leading to consistent inventories that can be used at a sub-regional level. This activity promotes continued local government leadership in the community towards energy efficiency energy efficiency

goals. A policy governing energy savings of GHG inventories and a standard methodology calculating the savings that would be used by Participating Municipalities will be developed.

Project Scope and Components: Implementer will develop policies and a standardized methodology for conducting an energy efficiency savings analysis of city facilities and operations for an annual Greenhouse Gas (GHG) inventory as part of the GHG Inventory and Reduction Plan tasks. The policies and standardized methodologies will be presented to each Participating Municipality for adoption.

> **Deliverables:**

1. Report on Status of Implementer or Subcontractor to Support the Task
2. Plan for Policies and Methodology Development for conducting the Energy Efficiency Savings Analysis for GHG Inventory
3. Draft Policies and Methodology for conducting the Energy Efficiency Savings Analysis for GHG Inventory
4. Final Policies and Methodology for conducting the Energy Efficiency Savings Analysis for GHG Inventory
5. Monthly reports of tracked Performance Indicators

Date Approved (Advice Letter (NTP)): December 2011 (December 2011)

Date Completed (est.): Oct 2012   **Date Completed (actual):** Jun 2014

Estimated Cost: $245,689   **Final Program Cost:** $1,173,196 ($2,061,593 Budget)

Local Match Contribution: $0

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

Program Budget Unspent: $888,397

Best Practices
• A standardized approach to monitoring and reporting energy and GHG emissions was developed for each Participating Municipality's municipal operations and community activities. The Excel-based tool is user-friendly and intuitive and Implementer held two training events for city staff to learn and become familiar with the tools

Lessons Learned

- Requesting data proved the biggest challenge during implementation of this task. This took a significant amount of time. Utilize the Green Button Connect My Data process to allow for a timelier transfer of energy usage data.

Knowledge Transferred

- To increase understanding of how to use the GHG inventory tool and to ensure its continued use, the final workshop was filmed and the video distributed to all cities to be used as a future training tool for all new staff.

Next Steps

- Cities are requesting data to continue monitoring energy use.

- Staff was trained to use the GHG inventory tool and were excited to use it. By connecting programs to demonstrable outcomes, the EE programs are likely to be more successful and be self-perpetuating, meaning that once savings are realized in some programs, future programs will be easier to implement.

Benefit to the State

- The development of the energy efficiency analysis of the Implementer's GHG inventory will benefit the State by providing a more in-depth analysis of energy efficiency strategies that can be included in the Implementer's Climate Action Plan or Energy Action Plan. When implemented these strategies will result in reduced energy use and reduced GHG emissions.

- Implemented measure will aid with the reduction of greenhouse gas emissions (GHG's) such as AB 32.

Benefit to Local Government

- Increased interest in tracking energy data in city operations and in the community.

- Increased staff engagement and understanding of data from the community.

- To increase tool understanding, and continued use, the final workshop was filmed and the video distributed to all cities to be used as a future tool training for all new staff.

Successes

- A standardized approach to monitoring and reporting energy and GHG emissions was developed for each Participating Municipality's municipal operations and community activities. The Excel-based tool is user-friendly and intuitive and Implementer held two

> (2) training events for city staff to learn and become familiar with the tools.
>
> - Implementer completed greenhouse gas (GHG) inventories for each of the Participating Municipalities. These GHG inventories were incorporated into the Energy Action Plans completed by Implementer under Strategic Plan Task 4.1.1.

Challenges

> - Requesting data proved the biggest challenge during implementation of this task.
>   - o The issues should be resolved with the further development of the "Green Button Connect My Data" processes.

6.   Strategic Plan Goal 5 – EE Expertise

"Local government energy efficiency expertise becomes widespread and typical."

6.1   Strategic Plan Task 5 – EE Expertise

Any task that advances the goal of Local government energy efficiency expertise becoming widespread and typical.

6.1.1   City of Huntington Beach – Phase 2

Local Government Partnership: Orange County Cities Partnership

Participating Municipality: County of Los Angeles

Project Title: Provide Energy Efficiency Services for Energy Efficiency Pilot Programs

Project Purpose: Implementer will conduct test projects to determine what type of resources would be most effective and/or how to improve the resource tools that are being developed. A minimum of three (3) test projects that will provide information to develop Local Government EE Resources will be completed.

Project Scope and Components: Provide Energy Efficiency Services for Energy Efficiency Test Projects: In coordination with the work being done by the Participating Municipality, Implementer will provide program documents and energy efficiency assessments and/or audits to other local governments for energy efficiency test projects. The energy efficiency documents will cover all aspects of project implementation from defining project scope documents to project close-out documents.

(NOTE: Coordinates with County of Los Angeles Task 3)

Deliverables:

1. Report on status of Implementer or Subcontractor to support the Task

2. Draft and final coordination of efforts plan including description of all activities for Task 2 and the local government energy efficiency resources program implemented by Participating Municipality, identification of overlapping activities, and delineation of responsibilities for the overlapping activities

3. Draft and final list of energy efficiency test projects and budgets including description of the methods to conduct the energy audit and/or assessment

4. Draft and final Program documents and checklist including project scope, generic strategies to build project support, detailed estimates of installation costs and savings, generic mix of cash and debt resources, final mix of funding sources, solicitation and procurement agreements, reporting requirements and templates, management, inspection and implementation guidelines, financing implementation guidelines, verification and measurement protocols, and project close-out guidelines

5. Report on the dissemination of Program documents and case studies of lessons learned:
   - Program documents
   - Quarterly newsletter
   - Conference materials

6. Monthly Status Report

Date Approved (Advice Letter (NTP)): September 2011 (November 2011)

Date Completed (est.): September 2012   **Date Completed (actual):** February 2015

Estimated Cost: $190,000   **Final Program Cost:** $399,641 ($380,000 Budget)

Local Match Contribution: Used ARRA to fund the installation of EE measures.

Project Reimbursed for LG Staff Time: Y / N

Program Budget Unspent: $0

Best Practices
• Programs and procedures for participating municipalities to develop and implement energy efficiency.

Lessons Learned

- It is hard to work with municipalities that do not have the top down support for implementing best practices to achieve energy efficiency.

- It is important especially in Orange County to separate the concept of GHG/Climate and Energy Efficiency. These projects/programs should be sold as economic efficiency and not "saving the planet."

Knowledge Transferred

- The materials created for this program are living documents on The Energy Network's website, and as new templates are created and used, they will be posted there as well. The intent of the resource pages on the website are for those jurisdictions that may not require full technical or project management assistance.

Next Steps

- Continue to share best practices and knowledge of energy efficiency trends, methodologies, and technology.

Benefit to the State

- Knowledge spreading between municipalities – this is a benefit to cities that do not have a dedicated energy manager/sustainability manager.

- Guidebooks enable municipalities to have "shelf-ready" concepts that can be applied to facilities. This includes, procedures, protocols, opportunity identification and assessment, project funding, technical analysis, measurement and verification, and management and reporting.

Benefit to Local Government

- Sharing of best practices between municipalities.

- Cost effective measures that are easy to implement.

- Collaboration amongst smaller municipalities.

Successes

- The Implementer provided Energy Efficiency Services for Energy Efficiency Test Projects in conjunction with Participating Municipality. In conjunction with Participating Municipality, the Implementer conducted five demonstrations of the EE Resources

developed by Participating Municipality and the Implementer. These projects included a cross section of project types as shown:

- o Alhambra - Street Lighting

- o Claremont - Whole Building

- o Newport Beach - Whole Building

- o Pomona - Whole Building

- o San Fernando - Pool Pump VFD

- The documentation for each project is available through the same channels as the EE Resource Guidebooks developed by Participating Municipality and the Implementer.

Challenges

- This task was too difficult to do without some form of implementation performed with ARRA funds. Therefore, through market research, pool pump VFDs and streetlight upgrades were identified as measures that could be aggregated across municipalities and approaches were devised in order to spur interest and increase demand for this type of project.

- Part of the implementation planning process involved working with the local government partnerships (LGPs) to make sure that the entire team realized that the SoCalREC program's goal was to bring additional projects to those partnerships. After exploring the projects in the current pipeline of these LGPs, the team decided that the best opportunity for complementing current efforts would be to focus on identification of new projects that were not already in the pipeline.

- The strategic plan dollars were designed to create tools to help local governments with resource constraints. When the LGs were approached about the program design and the test projects, they asked for help with procurement, project management, and engineering assistance.

6.1.2   City of Huntington Beach – Phase 2

Local Government Partnership: Orange County Cities Partnership

Participating Municipality: County of Los Angeles

Project Title: Develop Energy Efficiency Project Implementation Guidebooks

Project Purpose: The purpose of this task is to develop energy efficiency guidebooks and resource tools designed to guide local governments in the identification and installation of energy efficiency projects. Implementer will develop and disseminate the following energy efficiency implementation guidebooks:

1. Identifying energy efficiency projects,

2. Generic strategies for building project support,

3. Project financing,

4. Project procurement,

5. Project management and reporting,

6. Project post-implementation guidelines

Project Scope and Components: Provide Energy Efficiency Services for Energy Efficiency Test Projects: In coordination with the work being done by the Participating Municipality, Implementer will provide program documents and energy efficiency assessments and/or audits to other local governments for energy efficiency test projects. The energy efficiency documents will cover all aspects of project implementation from defining project scope documents to project close-out documents.

(NOTE: Coordinates with County of Los Angeles Task 3)

Deliverables:

1. Report on status of Implementer or Subcontractor to support the Task

2. Identifying energy efficiency projects guidebook -draft and final Program guidebook including:

    a. Process(es) for identifying candidate buildings,

    b. Financial criteria for project requirements and description of project scope, schedule, budget,

    c. Specifications, methodology for determining the appropriate energy efficiency assessment approach,

    d. Library of energy efficiency measures expected to be used by local governments, and

    e. Sustainability plan to maintain information

3. Generic strategies to build project support - draft and final Program guidebook including:

    a. Assessment of energy efficiency management capabilities,

    b. Assessment of energy efficiency mandates, policies and practices,

    c. List of best practices and available resources, and

    d. Develop generic energy efficiency management policy

4. Project financing guidebook - draft and final Program guidebook including identification of generic cash and debt resources, and how to manage funding for both individual and large scale projects

5. Energy efficiency project procurement guidebook -draft and final Program guidebook including project procurement agreements, library of technical specifications, and standard solicitation and procurement policies and procedures

6. Energy efficiency project management and reporting guidebook - draft and final Program guidebook including project management guidelines, project reporting templates, and project implementation and close-out guidelines

7. Energy efficiency project post- implementation Guidebook - draft and final Program guidebook including measurement and verification and post implementation reporting guidelines

8. Report on the dissemination of Program documents and case studies of lessons learned:
    - Program guidebooks
    - Conference materials

9. Monthly Status Reports

Date Approved (Advice Letter (NTP)): September 2011 (November 2011)

Date Completed (est.): September 2012   **Date Completed (actual):** February 2015

Estimated Cost: $190,000   **Final Program Cost:** $399,641 ($380,000 Budget)

Local Match Contribution: Used ARRA to fund the installation of EE measures.

Project Reimbursed for LG Staff Time: Ⓨ/ N

Program Budget Unspent: $0

Best Practices
• The tools and templates created by the project differ from already existing resources because they are tailored for public agencies in Southern California that are also pursuing utility rebates and incentives as a part of their retrofit projects.

Lessons Learned
• One of the main challenges of the project was how to create a catalog of valuable resources for cities that would actually be accessed and used. Local governments are strapped for funds, expertise and available staff time. It was important to create guidebooks that were streamlined and presented as a method for making the lives of those staff members easier. • Stakeholders are motivated by different factors, and saving energy is not necessarily

the top priority for all local government actors. Therefore, it is important to present a variety of justifications and benefits for energy upgrade projects in order to touch on each stakeholder's particular reason for moving forward. For example, financial benefit is an important motivator to local government officials, easing of workload and lessening of operational or budget "headaches" is attractive to many staff members, and getting credit as a "green" steward may be important to both elected officials and staff. Preparing materials in such a way that can motivate and convince a variety of stakeholders to move forward with projects is a key prerequisite.

Knowledge Transferred

- A webinar was held, and a companion video also provides an overview of the resources available to local governments. The webinar was recorded and distributed to SCE for viewing at a later date. The webinar walked through some of the highlights of the purpose of the website as well as the case studies and progress to date.

- The newsletter was distributed to jurisdictions in the REN territory either through the Advisory Committee representatives, direct communication, or through the IOU account reps. The newsletter invited local governments to visit the website resources as well as attend the workshop held during the second week of January 2014.

- The materials created for this program are living documents on The Energy Network's website, and as new templates are created and used, they will be posted there as well. The intent of the resource pages on the website are for those jurisdictions that may not require full technical or project management assistance.

Next Steps

- Created Guidebook for local governments that can be shared and utilized to achieve energy efficiency.

Benefit to the State

- The sharing of knowledge is essential if the State is to be successful in reaching its ambitious climate and energy goals. This is simply known as social diffusion. By sharing knowledge and showing other local jurisdictions that efficiency measures are easy to implement the goals of the state are more easily achieved.

Benefit to Local Government

- The Implementer developed and disseminated the following energy efficiency guidebooks:) identifying energy efficiency projects,
    - Generic strategies for building project support,

- o Project financing,

- o Project procurement,

- o Project management and reporting,

- o Project post-implementation guidelines

- The Guidebooks assist municipalities especially those without dedicated energy staff to implement projects and understand how to benchmark the success of the efficiency measures

Successes

- The Implementer and Participating Municipality developed a series of Energy Efficiency Project Implementation Guidebooks intended to assist local governments in identifying and developing energy efficiency projects. These guidebooks contain information that guides the local government through the implementation process of energy efficiency projects, including, procedures and protocols, opportunity identification and assessment, project funding, technical analyses, measurement and verification, and management and reporting. The guidebooks will be available to all local governments through the SoCalREN website.

Challenges

- One of the main challenges of the project was how to create a catalog of valuable resources for cities that would actually be accessed and used. Local governments are strapped for funds, expertise and available staff time. It was important to create guidebooks that were streamlined and presented as a method for making the lives of those staff members easier.

6.1.3   County of Los Angeles – Phase 1

Local Government Partnership: Los Angeles County Partnership

Participating Municipality: City of Huntington Beach

Project Title: Develop and Administer Local Government Energy Efficiency Resources

Project Purpose: Through the development of Local Government energy efficiency resources and energy efficiency program documents Local Governments can pursue the development and implementation of energy efficiency projects with improved efficacy and effectiveness.

Project Scope and Components: Implementer will provide the overall project management and oversight for both the Implementer's and Participating Municipality's SP Task 5.x, ensuring a coordinated and integrated task.

> **Deliverables:**

1. Report on status of Implementer or Subcontractor to support the Task
2. Draft and final coordination of efforts plan including description of all activities for Task 3 and the local government energy efficiency resources program implemented by Huntington Beach, identification of overlapping activities, and delineation of the responsibilities for the overlapping activities
3. Draft and final local government energy efficiency resources plan including: description and timeline for all activities, description of eligibility requirements for Task 3C, list of existing technical resources, and detailed discussion of how existing resources will be used in implementing Task 3C
4. Monthly status report

Date Approved (Advice Letter (NTP)): September 2011 (November 2011)

Date Completed (est.): Apr 2012   **Date Completed (actual):** August 2012

Estimated Cost: $20,000   **Final Program Cost:** $900,541 ($1,000,000 Budget)

Local Match Contribution: Used ARRA to fund the installation of EE measures.

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

Program Budget Unspent: $99,459

Best Practices
• For this task Implementer developed a coordination plan for all local government energy efficiency resource activities conducted by both the Implementer and Huntington Beach to ensure the related activities and tasks for the Participating Municipality and Implementer would be completed efficiently and effectively. This plan describes how energy efficiency resources for local governments will be developed.

Lessons Learned
• Implementer originally intended that the Resource Plan define how the program was going to use the available resources (both Implementer and Participating Municipality) in order to execute the program using ALL funding sources. SCE required that project

accounting and invoicing be done to ensure that any aspect of the project funded by ARRA be clearly identified and invoiced to ARRA, separate from ratepayer funded activities. This would help ensure that expenditures are charged to appropriate funding sources, i.e., ARRA activities would be invoiced to ARRA and Strategic Plan work be invoiced to SCE. The Implementer made the decision to have the final version of the Resource Plan only focusing on the SCE funded scope as it pertains to Strategic Plan activities, rather having the Resource Plan keep ARRA activities and Strategic Plan activities clearly identified and invoiced clearly and separately.

- It should be noted that the Strategic Plan Strategies Program allowed funding for a small number (3) of test where the installation of measures was allowed to do concept testing of the guidebooks and tools.

- It was difficult for the Implementer to stay within the task scope when the ARRA (DOE) funding allowing for more freedom in design and implementation. The ARRA funding was directed towards the programmatic installation of measures and equipment, where the Strategic Plan Strategies Program intended to test the concepts developed in the guidebooks.

Knowledge Transferred

- The materials created for this program are living documents on The Energy Network's (SoCalREN) website, and as new templates are created and used, they will be posted there as well. The intent of the resource pages on the website are for those Local Governments that may not require full technical or project management assistance.

Next Steps

- There are no Strategic Plan activities currently planned for LA County. However, Los Angeles County will continue to pursue Strategic Plan activities through the Los Angeles County Partnership with SoCalGas and Southern California Edison.

Benefit to the State

- The sharing of knowledge is essential if the State is to be successful in reaching its ambitious climate and energy goals. This is simply known as social diffusion. By sharing knowledge and showing other local jurisdictions that efficiency measures are easy to implement the goals of the state are more easily achieved.

Benefit to Local Government

- Knowledge spreading between municipalities – this is a benefit to cities that do not have a dedicated energy manager/sustainability manager.

- Guidebooks enable municipalities to have "shelf-ready" concepts that can be applied to facilities. This includes, procedures, protocols, opportunity identification and assessment, project funding, technical analysis, measurement and verification, and management and reporting.

Successes

- Through the Strategic Plan Strategies Program the Implementer and the Participating Municipality collaborated to develop technical resources for Local Governments through a series of guidebooks and to test these concepts on a small number of test projects. These guidebooks provide information and direction that help local governments identify, evaluate and implement energy efficiency projects at their facilities. These resources are available to all local governments. The resources that were developed include:

    o A series of implementation guidebooks including guidebooks on:

    o Identifying Energy Efficiency Projects in Municipal Buildings

    o Strategies to Build Project Support Guidebook

    o Project Financing Guidebook

    o Energy Efficiency Project Procurement Guidebook

    o Energy Efficiency Project Management and Reporting Guidebook

    o Energy Efficiency Project Post-Implementation Guidebook

    o Report on the plan for the dissemination of Energy Efficiency Project Implementation Guidebooks

- For this task Implementer developed a coordination plan for all local government energy efficiency resource activities conducted by both the Implementer and Huntington Beach to ensure the related activities and tasks for the Participating Municipality and Implementer would be completed efficiently and effectively. This plan describes how energy efficiency resources for local governments will be developed.

Challenges

- Implementer originally intended that the Resource Plan define how the program was going to use the available resources (both Implementer and Participating Municipality) in order to execute the program using ALL funding sources. SCE required that project accounting and invoicing be done to ensure that any aspect of the project funded by ARRA be clearly identified and invoiced to ARRA, separate from ratepayer funded activities. This would help ensure that expenditures are charged to appropriate funding sources, i.e., ARRA activities would be invoiced to ARRA and Strategic Plan work be invoiced to SCE. The Implementer made the decision to have the final version of the Resource Plan only focusing on the SCE funded scope as it pertains to Strategic Plan activities, rather having the Resource Plan keep ARRA activities and

> Strategic Plan activities clearly identified and invoiced clearly and separately.
>
> - It should be noted that the Strategic Plan Strategies Program allowed funding for a small number (3) of test where the installation of measures was allowed to do concept testing of the guidebooks and tools.
>
> - It was difficult for the Implementer to stay within the task scope when the ARRA (DOE) funding allowing for more freedom in design and implementation. The ARRA funding was directed towards the programmatic installation of measures and equipment, where the Strategic Plan Strategies Program intended to test the concepts developed in the guidebooks.

6.1.4 County of Los Angeles – Phase 1

Local Government Partnership: Los Angeles County Partnership

Participating Municipality: City of Huntington Beach

Project Title: *Prepare Draft and Final Local Government Energy Efficiency Resources Sustainability Plan*

Project Purpose: Implementer will develop a plan for an organizational structure that can provide energy efficiency services to Participating Municipalities beyond the PY2012 funding cycle.

Project Scope and Components: Prepare Draft and Final Local Government Energy Efficiency Resources Sustainability Plan - Implementer will develop recommendations for an organizational structure that can provide energy efficiency services to Local Governments beyond the PY2012 funding cycle.

Deliverables:

1. Draft and final   Local Government Energy Efficiency Resources Sustainability Plan

2. Draft plan includes the research and proposed methodologies for providing sustainability, a description and discussion of recommendations obtained from the Participating Municipalities on revenue generation, and the draft sustainability plan.

3. Final Local Government Energy Efficiency Resources Sustainability Plan

4. Monthly Status Reports

Date Approved (Advice Letter (NTP)): September 2011 (November 2011)

Best Practices/Lessons Learned from Strategic Plan (Draft)

2010-2012 Final Report

Date Completed (est.): Sep 2012   **Date Completed (actual):** November 2012

Estimated Cost: $50,000   **Final Program Cost:** $900,541 ($1,000,000 Budget)

Local Match Contribution: Used ARRA to fund the installation of EE measures.

Project Reimbursed for LG Staff Time: Ⓨ / N

Program Budget Unspent: $99,459

Best Practices
• Guidebooks enable municipalities to have "shelf-ready" concepts that can be applied to facilities. This includes, procedures, protocols, opportunity identification and assessment, project funding, technical analysis, measurement and verification, and management and reporting.

Lessons Learned
• It was difficult for the Implementer to stay within the task scope when the ARRA (DOE) funding allowing for more freedom in design and implementation. The ARRA funding was directed towards the programmatic installation of measures and equipment, where the Strategic Plan Strategies Program intended to test the concepts developed in the guidebooks.

Knowledge Transferred
• The materials created for this program are living documents on The Energy Network's (SoCalREN) website, and as new templates are created and used, they will be posted there as well. The intent of the resource pages on the website are for those jurisdictions that may not require full technical or project management assistance.

Next Steps
• There are no Strategic Plan activities currently planned for LA County. However, Los Angeles County will continue to pursue Strategic Plan activities through the Los Angeles County Partnership with SoCalGas and Southern California Edison.

Benefit to the State
• The sharing of knowledge is essential if the State is to be successful in reaching its ambitious climate and energy goals. This is simply known as social diffusion. By

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> sharing knowledge and showing other local jurisdictions that efficiency measures are easy to implement the goals of the state are more easily achieved.
>
> - Knowledge spreading between municipalities – this is a benefit to cities that do not have a dedicated energy manager/sustainability manager.
>
> - Guidebooks enable municipalities to have "shelf-ready" concepts that can be applied to facilities. This includes, procedures, protocols, opportunity identification and assessment, project funding, technical analysis, measurement and verification, and management and reporting.

Benefit to Local Government

- Local Governments and public agencies in the combined SCE/SoCalGas territory have embraced the idea of working on a regional level towards energy efficiency goals. The resources provided by these tasks give them information to identify and initiate energy efficiency projects.

Successes

- Implementer developed a plan to create an organizational structure that will deliver the energy efficiency resources developed by the Participating Municipality and Implementer to Local Governments beyond the end of the Strategic Plan Strategies Program.

Challenges

- It was difficult for the Implementer to stay within the task scope when the ARRA (DOE) funding allowing for more freedom in design and implementation. The ARRA funding was directed towards the programmatic installation of measures and equipment, where the Strategic Plan Strategies Program intended to test the concepts developed in the guidebooks.

6.1.5   County of Los Angeles – Phase 1

Local Government Partnership: Los Angeles County Partnership

Participating Municipality: City of Huntington Beach

Project Title: Provide Energy Efficiency Services for Energy Efficiency Pilot Projects – 3C

Project Purpose: In coordination with Huntington Beach Phase 2 – SP Task 5, Implementer will conduct test projects to determine what type of resources would be most effective and/or how to improve the resource tools that are being developed. Specific steps include the development or identification of:

1. Draft list of municipal buildings and energy efficiency test projects.

2. Project scope, schedule, budget, and financial requirements specifications;

3. Generic project strategies;

4. Detailed estimates of installation cost, and energy savings estimate, using the SCE approved method for implementing energy assessments and/or audits;

5. Generic cash resources;

6. Generic debt resources;

7. Final mix of funding sources and projects including funding for project management;

8. Project solicitation and procurement agreements and processes;

9. Project reporting requirements and templates;

10. Project management, implementation and inspection guidelines;

11. Project financing implementation guidelines;

12. Project M&V protocols for projects with utility cost-effectiveness requirements and/or investment return requirements for all projects with debt financing; and

13. Project close-out activity guidelines.

Project Scope and Components: Provide Energy Efficiency Services for Energy Efficiency Pilot Projects: (1) Implementer will develop draft and final list of energy efficiency test projects and budgets; and (2) Implementer will provide program documents and energy efficiency assessments and / or audits to Participating Municipalities for energy efficiency test projects. Additional work on these test projects will be conducted through the Participating Municipality.

The work Implementer supplied to support these test projects included:

- A qualified list of energy efficiency test projects and budgets.

- Program documents and energy efficiency assessments and/or audits provided to Participating Municipalities for energy efficiency test projects.

    Deliverables:

1. Draft and final list of energy efficiency test projects and budgets including a description of the methods to conduct the energy audit and/or assessment

2. Draft and final program documents and checklist including project scope, generic strategies to build project support, detailed estimates of installation costs and savings, generic mix of cash and debt resources, final mix of funding sources, solicitation and procurement agreements, reporting requirements and templates, management, inspection and implementation guidelines, financing implementation guidelines, verification and measurement protocols, and project close-out guidelines

3. Report on the dissemination of program documents and case studies of lessons learned

4. Monthly Status Reports

Date Approved (Advice Letter (NTP)): September 2011 (November 2011)

Date Completed (est.): Sep 2012 **Date Completed (actual):** January 2014

Estimated Cost: $130,000 **Final Program Cost:** $900,541 ($1,000,000 Budget)

Local Match Contribution: Used ARRA to fund the installation of EE measures.

Project Reimbursed for LG Staff Time: Ⓨ/ N

Program Budget Unspent: $99,459

Best Practices
• Guidebooks enable municipalities to have "shelf-ready" concepts that can be applied to facilities. This includes, procedures, protocols, opportunity identification and assessment, project funding, technical analysis, measurement and verification, and management and reporting.

Lessons Learned
• It was difficult for the Implementer to stay within the task scope when the ARRA (DOE) funding allowing for more freedom in design and implementation. The ARRA funding was directed towards the programmatic installation of measures and equipment, where the Strategic Plan Strategies Program intended to test the concepts developed in the guidebooks.

Knowledge Transferred
• The materials created for this program are living documents on The Energy Network's (SoCalREN) website, and as new templates are created and used, they will be posted there as well. The intent of the resource pages on the website are for those jurisdictions that may not require full technical or project management assistance.

Next Steps

- There are no Strategic Plan activities currently planned for LA County. However, Los Angeles County will continue to pursue Strategic Plan activities through the Los Angeles County Partnership with SoCalGas and Southern California Edison.

Benefit to the State

- The sharing of knowledge is essential if the State is to be successful in reaching its ambitious climate and energy goals. This is simply known as social diffusion. By sharing knowledge and showing other local jurisdictions that efficiency measures are easy to implement the goals of the state are more easily achieved.

- Knowledge spreading between municipalities – this is a benefit to cities that do not have a dedicated energy manager/sustainability manager.

- Guidebooks enable municipalities to have "shelf-ready" concepts that can be applied to facilities. This includes, procedures, protocols, opportunity identification and assessment, project funding, technical analysis, measurement and verification, and management and reporting.

Benefit to Local Government

- A total of five test, or demonstration, projects were completed and documented as case studies that are posted to The Energy Network (SoCalREN) website. These case studies will be used by local governments to assist with planning future projects.

Successes

- The list of projects was submitted to SCE for review and approval and the revised version was approved for implementation including pool pump VFDs in San Fernando and Streetlight upgrades in Alhambra as single measures.

- Of the approved project list, Pomona was approved for an integrated whole building approach at their City Hall combined with their streetlights and pool pump VFD, Newport Beach was approved for their library, and Claremont was approved for their Recreation Center as well as their streetlights.

- A small number of projects became good candidates for integrated audits along with equipment lease financing, leveraging procurement and implementation efforts implemented with ARRA dollars

- A total of five test, or demonstration, projects were completed and documented as case studies that are posted to The Energy Network (SoCalREN) website.

Challenges
• This task was too difficult to do without some form of implementation performed with ARRA funds. Therefore, through market research, pool pump VFDs and streetlight upgrades were identified as measures that could be aggregated across municipalities and approaches were devised in order to spur interest and increase demand for this type of project.
• Part of the implementation planning process involved working with the Local Government Partnerships (LGPs) to make sure that the entire team realized that the SoCalREC program's goal was to bring additional projects to those partnerships. After exploring the projects in the current pipeline of these LGPs, the team decided that the best opportunity for complementing current efforts would be to focus on identification of new projects that were not already in the pipeline.
• The strategic plan dollars were designed to create tools to help local governments with resource constraints. When the Local Governments were approached about the program design and the test projects, they asked for help with procurement, project management, and engineering assistance.

6.1.6   City of Moreno Valley – Phase 1

Local Government Partnership: Community Energy Partnership

Project Title: Share Lessons Learned with Other Communities in the SCE's Service Territory

Project Purpose: Implementer will convene a conference of local government officials. At the conference, key lessons with the implementation of energy efficiency will be discussed and related. Equally important to sharing successes, will be sharing challenges. The Implementer will develop a power point presentation of its process with energy efficiency, showing others how it assessed a myriad of options and how it selected the key policies and programs best suited to its demographics and climate zone.

Project Scope and Components: Implementer will share strategies, initiatives and Program successes with other cities located within SCE's service territory to ensure that lessons learned during program development and implementation deliver maximum benefit.

   Deliverables:

1. Implementer to host 2-3 regional workshops to present Program strategies, initiatives and success stories
2. Provide peer-to-peer consultation or mentoring to selected agencies

3. Implementation report on best practices and lessons learned

4. Monthly report of tracked Performance Indicators

Date Approved (Advice Letter (NTP)): March 2011 (April 2011)

Date Completed (est.): November 2012 **Date Completed (actual):** December 2013

Estimated Cost: $33,411 **Final Program Cost:** $365,379 ($375,513 Budget)

Local Match Contribution: $0

Project Reimbursed for LG Staff Time: Y / N

Program Budget Unspent: $10,134

Best Practices
• The Implementer was able to make these presentations into a positive experience where people could connect with what other local cities are doing in efforts to be more energy efficient, and also make contacts so that cities can contact one another and learn from one another. All appropriate staff from other Local Governments were invited which helped raise awareness of the Implementer's energy efficiency planning efforts. The Implementer has had ongoing discussions with Western Riverside Council of Governments regarding energy efficiency in our region.

Lessons Learned
• City Council and Planning Commission were supportive.
• The different City Departments and Divisions came together to create our own energy efficiency saving analysis.
• Researched and contacted other cities, and learned from what other cities did.
• The Implementer explored what it is currently doing to be energy efficient, and came up with potential future policy that could help with energy efficiency.

Knowledge Transferred
• Conducted two (2) regional workshops in June and September 2013.

Next Steps

- As funding becomes available implement energy efficiency expertise.

Benefit to the State

- This EAP demonstrates the Implementer's commitment to achieve energy savings and establish long term energy efficiency goals.

- The Implementer is committed to reduce the environmental impact and fiscal impact of energy usage in municipal facilities. The Implementer will reduce energy demand and related emissions from Implementer's government operations and facilitate reductions through the goals, measures, and actions identified in this EAP.

- These efforts will sustain the economic, environmental, and physical health of the community and provide the highest quality of life possible.

Benefit to Local Government

- This EAP demonstrates the Implementer's commitment to achieve energy savings and establish long term energy efficiency goals.

- The Implementer is committed to reduce the environmental impact and fiscal impact of energy usage in municipal facilities. The Implementer will reduce energy demand and related emissions from Implementer's government operations and facilitate reductions through the goals, measures, and actions identified in this EAP.

- These efforts will sustain the economic, environmental, and physical health of the community and provide the highest quality of life possible.

Successes

- The City hosted two (2) workshops for LGs in SCE's Service Territory to share lessons learned from the City's experiences in addressing its climate action strategies, developing reach codes and municipal energy revolving funds through the Strategic Plan Strategies Program.

- Workshop held in June 2013 that addressed:

  o Energy Action Plans

  o Climate Action Strategies

  o GHG Analyses

  Neighboring cities, WRCOG were in attendance.

- Workshop held in September 2013 that addressed:

  o Reach Codes

  o Energy Revolving Funds

Neighboring cities, WRCOG and The Energy Coalition were in attendance.

Challenges
• No significant challenges were encountered in this task.

6.1.7 City of Santa Ana – Phase 1

Local Government Partnership: Santa Ana Partnership

Project Title: Provide California Green Building Code Compliance and LEED Certification Training

Project Purpose: The purpose of this program is to provide California Green Building Code and LEED certification training to city staff, legislative and advisory bodies. The training will enable Staff to provide a higher level of expertise and competence in addressing green building initiatives and code compliance, as well as be more responsive to the building industry.

Project Scope and Components: Provide California Green Building Code and LEED Certification Training: Implementer will provide California Green Building Code and LEED Certification training to Implementer's staff and members of legislative and advisory groups. Implementer will also purchase all materials for the Green Building Code and LEED certification

Deliverables:

1. Assessment and planning report for California Green Building Code and LEED certification training
2. Provide quarterly schedule of training courses to CPM
3. Implementation report
4. Report on best practices and lessons learned
5. Monthly Status Report

Date Approved (Advice Letter (NTP)): March 2011 (August 2011)

Date Completed (est.): March 2012   **Date Completed (actual):** December 2012

Estimated Cost: $ 281,310   **Final Program Cost:** $574,043 ($729,928 Budget)

Local Match Contribution: $0

Project Reimbursed for LG Staff Time: Ⓨ / N

Program Budget Unspent: $155,885

Best Practices
• The training was essential to the work done by code compliance and enforcement teams as well as those reviewing Title 24 requirements. Being able to leverage these trainings allowed for the increase in EE capacity and development of the city staff.

Lessons Learned
• Surveys of participants showed a positive change to Implementer's workforce regarding LEED practices learned

Knowledge Transferred
• The CalGreen training which was conducted has been shared with neighboring cities. One of these cities is interested in duplicating the effort within their city

Next Steps
• The Implementer implemented a CALGreen checklist along with certificates of compliance for new building projects.

Benefit to the State
• Implementer's staff is better prepared to handle code compliance activities and have a better understanding of energy efficiency can be incorporated. The Implementer's staff has additional skills to promote energy.

Benefit to Local Government
• Increase expertise in sustainable building practices.
• Increase energy efficiency design and green buildings in the community.
• Staff can make appropriate recommendations to architects/builders to apply energy efficiency and sustainable improvements to new construction.

Successes

• Provided California Green Building Code and LEED certification training. Classes were held for staff and Committee and Commission members.
 	
    o   A total of 65 participants attended the LEED certification training classes.
 	
    o   A total of 28 participants attended the CALGreen training classes.
 	
• Classes were for employees and commission/committee members only.
 	
• Class participants consisted of employees that have connection to sustainability-related departments

Challenges
• The classes were difficult to fill due to the economic downturn. Supervisors were concerned about having employees out of office during cutbacks. • One of the goals of the training program was that employees become LEED accredited. It was difficult to get employees to sign up and take the LEED GA and LEED AP exams. The program did pay for the exams, however additional incentives may need to be put in place to encourage class participants to take the exams. These could include allowing time to study for the test, additional time off, compensation, or recognition.

6.1.8   City of Santa Monica – Phase 1

Local Government Partnership: Community Energy Partnership

Participating Municipality: City of Brea

Project Title: Develop Community Energy Efficiency Project Management System (CEEPMS)

Project Purpose: Develop Community Energy Efficiency Project Management System that will integrate with online permitting systems and enable Implementer to track and manage permitted projects that have added EE measures as a result of the online permitting system.

Project Scope and Components: Implementer will develop and implement an integrated online Community Energy Efficiency Project Management System (CEEPMS) that uses the data collection and communication capabilities of the existing on-line permitting systems of the Implementer and Participating Municipality. CEEPMS will organize and automate existing energy efficiency permit information and make it accessible to contractors, residents and business owners to help them make better-informed decisions regarding energy efficiency by

providing information on applicable energy efficiency measures and programs. CEEPMS will allow for the quantitative measurement of the energy efficiency activities of the community.

Deliverables:

1. Draft RFP (if competitive bid) or scope of work (if direct award) for consultation services CEEPMS development

2. Final RFP (if competitive bid) or scope of work (if direct award) for consultation services for CEEPMS development

3. Contract award announcement for consultation services for CEEPMS development

4. Draft CEEPMS base model technical specifications

5. Final CEEPMS base model technical specifications

6. CEEPMS base model (beta)

7. CEEPMS base model (final)

8. Draft electronic resource center of current utility, state and federal energy efficiency programs

9. Final electronic resource center of current utility, state and federal energy efficiency programs

10. Draft CEEPMS base model training materials

11. Final CEEPMS base model training materials

12. Beta Implementer and Participating Municipality CEEPMS

13. Live and fully functional Implementer and Participating Municipality CEEPMS

14. Draft city-specific CEEPMS training materials and plans

15. Final city-specific CEEPMS training materials and plans

16. Draft Implementer and Participating Municipality CEEPMS promotion and publicity plan and materials

17. Final Implementer and Participating Municipality CEEPMS promotion and publicity plan and materials

18. Draft pre- and post-CEEPMS permit process evaluation report

19. Final pre- and post-CEEPMS permit process evaluation report

20. Draft CEEPMS Replication Guide

21. Final CEEPMS Replication Guide

22. Draft plan for sharing CEEPMS Replication Guide

23. Final plan for sharing CEEPMS Replication Guide

24. Monthly report of tracked Performance Indicators

Best Practices/Lessons Learned from Strategic Plan (Draft)

2010-2012 Final Report

Date Approved (Advice Letter (NTP)): March 2011 (June 2011)

Date Completed (est.): October 2012   **Date Completed (actual):** December 2013

Estimated Cost: $230,000   **Final Program Cost:** $317,974 ($374,000 Budget)

Local Match Contribution: $0

Project Reimbursed for LG Staff Time: Y / N

Program Budget Unspent: $56,026

Best Practices
• Utilize existing channels where people expect to get information. Creating new platforms is challenging with respect to new technology, building recognition and training.

Lessons Learned
• Through the process of implementing test CEEPMS projects, multiple lessons learned can be shared with local governments seeking similar installations.   o The rebate matching hinges on the ability to collect meaningful data off of the permits.   o Maintaining a robust rebate database is critical. Including specific rebate websites, FAQ links, and contact information is helpful for the end user. The more specific the rebate listing the better (e.g. listing specific solution codes for SCE Express Rebates, rather than simply listing one line item referencing the Express Rebates" offerings).   o Equally important is the ability for the user to refine their search if the matching is in the case of a multi-trade permit.   o Many enhancements would benefit the current CEEPMS system. At its core, CEEPMS works as a stand-alone tool with manual functionality.

Knowledge Transferred
• CEEPMS has been mentioned in a paper presented at the 2014 ACEEE Summer Study.   • The Energy Network (SoCalREN) has mentioned CEEPMS as a regional tool that can be expanded to other Local Governments

Next Steps
• Ultimately the CEEPMS was abandoned.

Benefit to the State
• The CEEPMS provided limited value to the State as it was never fully embraced by the Implementer.

Benefit to Local Government
• The CEEPMS provided limited value to the Implementer.

Successes

• CEEPMS is live and fully functional for Implementer.
 	
• Integration with the Participating Municipality online permitting system was not successful
 	
• Three portals comprise the CEEPMS system
 	
    o User Portal: for residents and contractors
 	
        ▪ Links to rebates and programs
 	
    o City Portal: for City staff to manage permits and reports.
 	
        ▪ Limited access can be granted for users of this portal
 	
    o Admin Portal: for CEEPMS administrator to:
 	
        ▪ Change access rights
 	
        ▪ Update rebates and program information
 	
        ▪ Perform other administrative functions
 	
• Key deliverables include:
 	
    o CEEPMS User's Manual/Training Plan
 	
    o CEEPMS Publicity and Marketing Plan
 	
    o CEEPMS Replication Guide Sharing Plan
 	
    o CEEPMS Base Model Technical Specifications

Challenges
• Creating new platforms is challenging with respect to new technology, building

recognition and training.