San Gabriel Valley Energy Wise Partnership

Program Overview

- **Year Formed:** 2006
- **Member agencies:** 29 cities
  - **Largest City:** Pomona (163,000 pop.)
  - **Smallest City:** Bradbury (963 pop.)
- **Population:** 1.9 million
- **Lead local government partner:**
  San Gabriel Valley Council of Governments

Program Goals

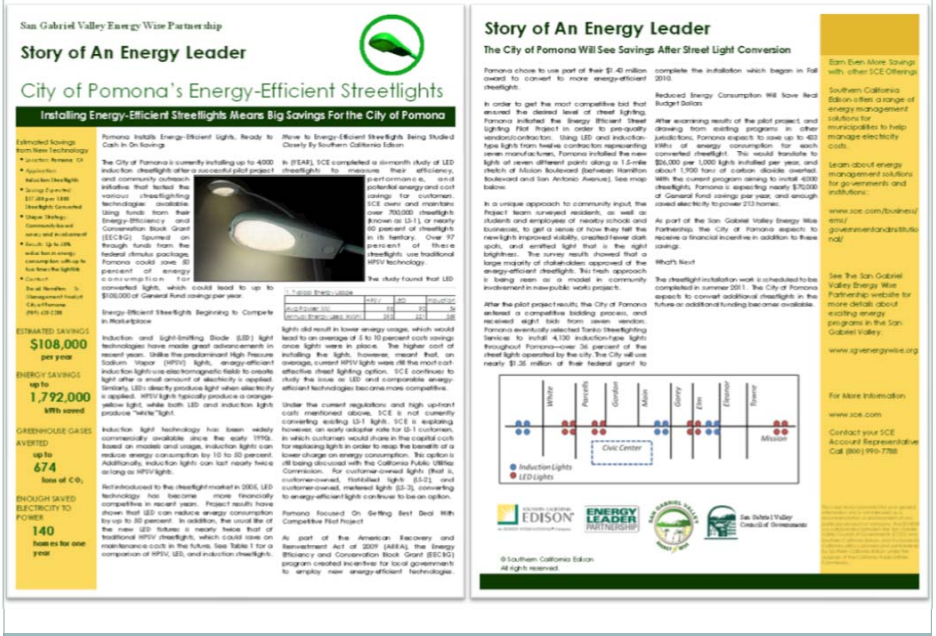
- **2010**
  - **Goal:** 794,346 kWh
  - **Status:** 992,943 kWh savings from installed projects (125% of goal)
- **2011**
  - **Goal:** 1,390,105 kWh
  - **Status:** Approximately 2.8 million kWh savings identified in committed pipeline projects (200% of goal)
- **2012**
  - **Goal:** 1,787,278
  - **Status:** Approximately 440,000 kWh savings identified in committed pipeline projects

Program Strengths and Challenges

- Strengths
  - Program team
  - Multi-city structure allows for sharing of best practices
  - Widespread impact
- Challenges
  - Largest ELP program in SCE territory
  - Varying levels of engagement and capacity amongst member cities
  - Varying channels of managing Partnership activities amongst cities

Direct Implementation Activities

- Ongoing
  - One-on-one Partnership meetings
- 2010
  - Stimulus Workshop
- 2011
  - Toolbox Training Sessions
  - Featured project 1-pagers
  - Energy Leader Model support



San Gabriel Valley Energy Wise Partnership

Story of An Energy Leader

City of Pomona's Energy-Efficient Streetlights

Installing Energy-Efficient Streetlights Means Big Savings For the City of Pomona

Pomona Installs Energy-Efficient Lights, Ready to Cash In On Savings

The City of Pomona is currently installing up to 4000 induction streetlights after a successful pilot project and community outreach initiative that tested the various streetlighting technologies available. Using funds from their Energy-Efficiency and Conservation Block Grant (EECBG) (pumped on through funds from the federal stimulus package, Pomona could save 10 percent of energy consumption for converted lights, which could lead to up to $108,000 of General Fund savings per year.

Energy-Efficient Streetlights Beginning to Compete in Marketplace

Induction and Light-Emitting Diode (LED) light technologies have made great advancements in recent years. Unlike the predominant High Pressure Sodium Vapor (HPSV) lights, energy-efficient induction light uses electromagnetic fields to create light after a small amount of electricity is applied. Similarly, LEDs directly produce light when electricity is applied. HPSV lights typically produce a orange-yellow light, while both LED and induction lights produce "white" light.

Induction light technology has been widely commercially available since the early 1990s. Based on models and usage, induction lights can reduce energy consumption by 10 to 30 percent. Additionally, induction lights can last nearly twice as long as HPSV lights.

Reintroduced to the streetlight market in 2008, LED technology has become more financially competitive in recent years. Project results have shown that LED can reduce energy consumption by up to 50 percent. In addition, the usual life of the new LED fixtures is nearly twice that of traditional HPSV streetlights, which could save on maintenance costs in the future. See Table 1 for a comparison of HPSV, LED, and induction streetlights.

Move to Energy-Efficient Streetlights Being Studied Closely By Southern California Edison

In (YEAR), SCE completed a six-month study of LED streetlights to measure their efficiency, performance, and potential energy and cost savings for customers. SCE owns and maintains over 700,000 streetlights (known as GS-1) or nearly 80 percent of streetlights in its territory. Over 97 percent of these streetlights use traditional HPSV technology.

The study found that LED

	HPSV	LED	Induction
Average Power (W)	310	215	70
Annual Energy Usage (kWh)	1,302	903	294

lights did result in lower energy usage, which would lead to an average of 5 to 10 percent cost savings once lights were in place. The higher cost of installing the light, however, meant that, on average, current HPSV lights were still the most cost-effective street lighting option. SCE continues to study the issue as LED and comparable energy-efficient technologies become more competitive.

Under the current regulations and high up-front costs mentioned above, SCE is not currently converting existing GS-1 lights. SCE is exploring, however, an early adopter rate for GS-1 customers, in which customers would share in the capital costs for replacing lights in order to reap the benefits of a lower charge on energy consumption. This option is still being discussed with the California Public Utilities Commission. For customer-owned lights (that is, customer-owned, Non-Metered lights (GS-2), and customer-owned, metered light (GS-3), converting to energy-efficient lights continues to be an option.

Pomona Focused On Getting Best Deal With Competitive Pilot Project

As part of the American Recovery and Reinvestment Act of 2009 (ARRA), the Energy Efficiency and Conservation Block Grant (EECBG) program created incentives for local governments to employ new energy-efficient technologies.

ESTIMATED SAVINGS
$108,000 per year

ENERGY SAVINGS
up to
1,792,000 kWh saved

GREENHOUSE GASES AVERTED
up to
674 tons of CO_2

ENOUGH SAVED ELECTRICITY TO POWER
140 homes for one year

Story of An Energy Leader

The City of Pomona Will See Savings After Street Light Conversion

Pomona chose to use part of their $1.43 million award to convert to more energy-efficient streetlights.

In order to get the most competitive bid that ensured the desired level of street lighting, Pomona initiated the Energy Efficient Street Lighting Pilot Project in order to pre-qualify vendors/contractors. Using LED and induction type lights from twelve contractors representing seven manufacturers, Pomona installed the new lights at seven different points along a 1.5-mile stretch of Mission Boulevard (between Hamilton Boulevard and San Antonio Avenue). See map below.

In a unique approach to community input, the Project team surveyed residents, as well as students and employees at nearby schools and businesses, to get a sense of how they felt the new lights improved visibility, created fewer dark spots, and emitted light that is the right brightness. The survey results showed that a large majority of stakeholders approved of the energy-efficient streetlights. This fresh approach is being seen as a model in community involvement in new public works projects.

After the pilot project results, the City of Pomona entered a competitive bidding process, and received eight bids from seven vendors. Pomona eventually selected Tonko Streetlighting Services to install 4,100 induction-type lights throughout Pomona—over 36 percent of the street light operated by the city. The City will use nearly $1.36 million of their federal grant to complete the installation which began in Fall 2010.

Reduced Energy Consumption Will Save Real Budget Dollars

After examining results of the pilot project, and drawing from existing programs in other jurisdictions, Pomona expects to save up to 482 kWhs of energy consumption for each converted streetlight. This would translate to $56,000 per 1,000 lights installed per year, and about 1,900 tons of carbon dioxide averted. With the current program aiming to install 4000 streetlights, Pomona is expecting nearly $70,000 of General Fund savings per year, and enough saved electricity to power 213 homes.

As part of the San Gabriel Valley Energy Wise Partnership, the City of Pomona expects to receive a financial incentive in addition to these savings.

What's Next

The streetlight installation work is scheduled to be completed in summer 2011. The City of Pomona expects to convert additional streetlights in the future as additional funding becomes available.

Earn Even More Savings with other SCE Offerings

Southern California Edison offers a range of energy management solutions for municipalities to help manage electricity costs.

Learn about energy management solutions for governments and institutions:

www.sce.com/business/emu/governmentandinstitutional/

See The San Gabriel Valley Energy Wise Partnership website for more details about existing energy programs in the San Gabriel Valley:

www.sgvenergywise.org

For More Information

www.sce.com

Contact your SCE Account Representative
Call (800) 990-7788

Strategic Planning Activities

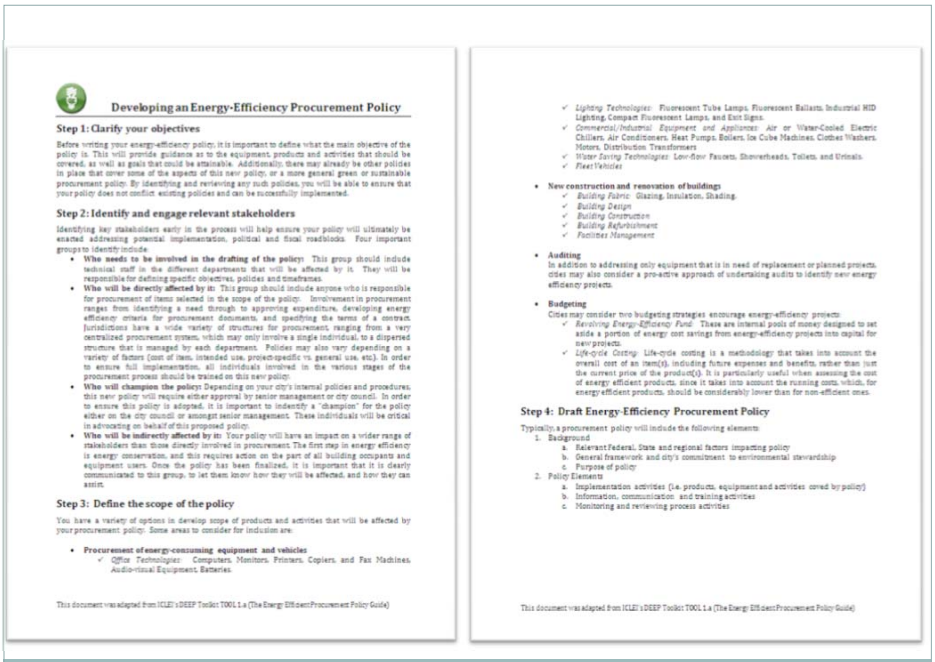
- 2010
  - Strategic planning survey and needs assessment
  - Existing policy, ordinance and program library
- 2011
  - Policy and program template library
  - Focus areas: purchasing policies, residential outreach programs, and EU permit fee waivers

Model Library of City Policies and Programs

City	Policies, Codes, and Ordinances					Other Energy Programs	Green City Plans/CAPs
	Green Building	Reach Codes	Energy Conservation	Solar Power	EPP		
Alhambra	*						
Arcadia					*	*	*
Baldwin Park	*					*	
Bradbury							
Claremont	*		*	*	*	√	√
Covina	*		*		*	*	
Diamond Bar	*		*	*	*	*	*
Duarte	*		√	*		*	
El Monte	*		*	*			
Glendora	*		*	*	*	*	*
Industry							
Irwindale	*		*	*	√	*	*
La Cañada-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			*		*		
West Covina				√			

√ Policy or Program has been adopted

* Policy or Program is in development



Developing an Energy-Efficiency Procurement Policy

Step 1: Clarify your objectives

Before writing your energy-efficiency policy, it is important to define what the main objective of the policy is. This will provide guidance as to the equipment, products and activities that should be covered, as well as goals that could be attainable. Additionally, there may already be other policies in place that cover some of the aspects of this new policy, or a more general green or sustainable procurement policy. By identifying and reviewing any such policies, you will be able to ensure that your policy does not conflict existing policies and can be successfully implemented.

Step 2: Identify and engage relevant stakeholders

Identifying key stakeholders early in the process will help ensure your policy will ultimately be enacted addressing potential implementation, political and fiscal roadblocks. Four important groups to identify include:

- **Who needs to be involved in the drafting of the policy:** This group should include technical staff in the different departments that will be affected by it. They will be responsible for defining specific objectives, policies and timeframes.
- **Who will be directly affected by it:** This group should include anyone who is responsible for procurement of items selected in the scope of the policy. Involvement in procurement ranges from identifying a need through to approving expenditure, developing energy efficiency criteria for procurement documents, and specifying the terms of a contract. Jurisdictions have a wide variety of structures for procurement, ranging from a very centralized procurement system, which may only involve a single individual, to a dispersed structure that is managed by each department. Policies may also vary depending on a variety of factors (cost of item, intended use, project-specific vs general use, etc). In order to ensure full implementation, all individuals involved in the various stages of the procurement process should be trained on this new policy.
- **Who will champion the policy:** Depending on your city's internal policies and procedures, this new policy will require either approval by senior management or city council. In order to ensure this policy is adopted, it is important to indentify a "champion" for the policy either on the city council or amongst senior management. These individuals will be critical in advocating on behalf of this proposed policy.
- **Who will be indirectly affected by it:** Your policy will have an impact on a wider range of stakeholders than those directly involved in procurement. The first step in energy efficiency is energy conservation, and this requires action on the part of all building occupants and equipment users. Once the policy has been finalized, it is important that it is clearly communicated to this group, to let them know how they will be affected, and how they can assist.

Step 3: Define the scope of the policy

You have a variety of options in develop scope of products and activities that will be affected by your procurement policy. Some areas to consider for inclusion are:

- **Procurement of energy-consuming equipment and vehicles**
  - ✓ *Office Technologies:* Computers, Monitors, Printers, Copiers, and Fax Machines, Audio-visual Equipment, Batteries.

This document was adapted from ICLEI's DEEP Toolkit TOOL 1.a (The Energy Efficient Procurement Policy Guide)

  - ✓ *Lighting Technologies:* Fluorescent Tube Lamps, Fluorescent Ballasts, Industrial HID Lighting, Compact Fluorescent Lamps, and Exit Signs.
  - ✓ *Commercial/Industrial Equipment and Appliances:* Air or Water-Cooled Electric Chillers, Air Conditioners, Heat Pumps, Boilers, Ice Cube Machines, Clothes Washers, Motors, Distribution Transformers
  - ✓ *Water Saving Technologies:* Low-flow Faucets, Showerheads, Toilets, and Urinals.
  - ✓ *Fleet Vehicles*

- **New construction and renovation of buildings**
  - ✓ *Building Fabric:* Glazing, Insulation, Shading.
  - ✓ *Building Design*
  - ✓ *Building Construction*
  - ✓ *Building Refurbishment*
  - ✓ *Facilities Management*

- **Auditing**
  In addition to addressing only equipment that is in need of replacement or planned projects, cities may also consider a pro-active approach of undertaking audits to identify new energy efficiency projects.

- **Budgeting**
  Cities may consider two budgeting strategies encourage energy-efficiency projects:
  - ✓ *Revolving Energy-Efficiency Fund:* These are internal pools of money designed to set aside a portion of energy cost savings from energy-efficiency projects into capital for new projects.
  - ✓ *Life-cycle Costing:* Life-cycle costing is a methodology that takes into account the overall cost of an item(s), including future expenses and benefits, rather than just the current price of the product(s). It is particularly useful when assessing the cost of energy efficient products, since it takes into account the running costs, which, for energy-efficient products, should be considerably lower than for non-efficient ones.

Step 4: Draft Energy-Efficiency Procurement Policy

Typically a procurement policy will include the following elements:

1. Background
   a. Relevant Federal, State and regional factors impacting policy
   b. General framework and city's commitment to environmental stewardship
   c. Purpose of policy
2. Policy Elements
   a. Implementation activities (i.e. products, equipment and activities coved by policy)
   b. Information, communication and training activities
   c. Monitoring and reviewing process activities

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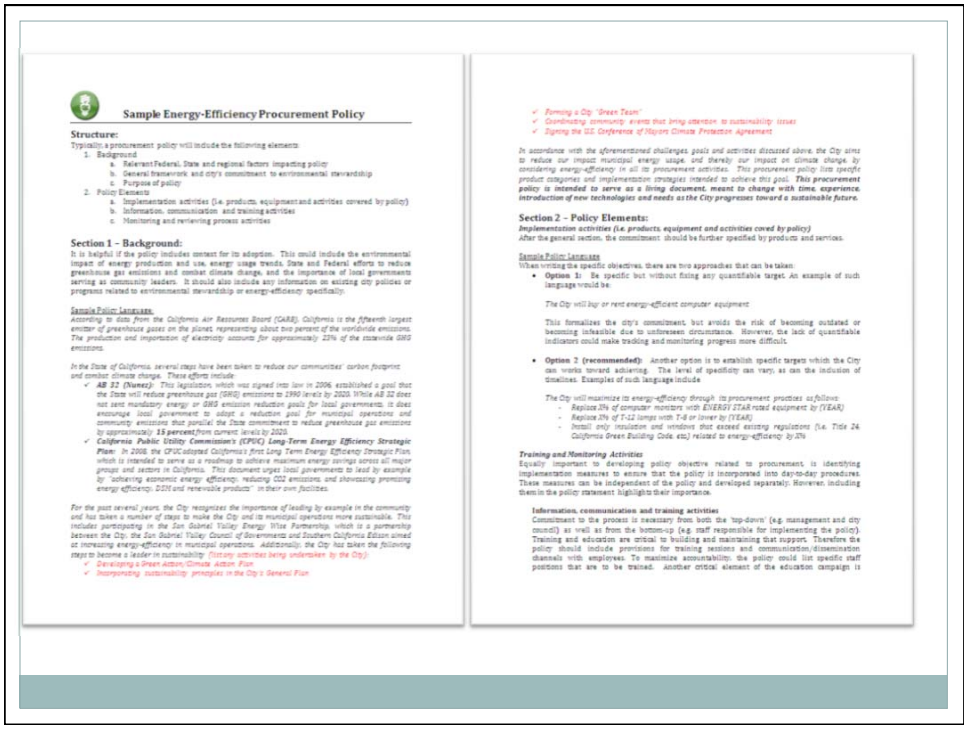

Sample Energy-Efficiency Procurement Policy

Structure:
Typically, a procurement policy will include the following elements:

1. Background
   a. Relevant Federal, State and regional factors impacting policy
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   c. Purpose of policy
2. Policy Elements
   a. Implementation activities (i.e. products, equipment and activities covered by policy)
   b. Information, communication and training activities
   c. Monitoring and reviewing process activities

Section 1 – Background:
It is helpful if the policy includes context for its adoption. This could include the environmental impact of energy production and use, energy usage trends, State and Federal efforts to reduce greenhouse gas emissions and combat climate change, and the importance of local governments serving as community leaders. It should also include any information on existing city policies or programs related to environmental stewardship or energy-efficiency specifically.

Sample Policy Language:
According to data from the California Air Resources Board (CARB), California is the fifteenth largest emitter of greenhouse gases on the planet, representing about two percent of the worldwide emissions. The production and importation of electricity accounts for approximately 23% of the statewide GHG emissions.

In the State of California, several steps have been taken to reduce our communities' carbon footprint and combat climate change. These efforts include:

- ✓ ***AB 32 (Nunez):*** *This legislation, which was signed into law in 2006, established a goal that the State will reduce greenhouse gas (GHG) emissions to 1990 levels by 2020. While AB 32 does not send mandatory energy or GHG emission reduction goals for local governments, it does encourage local government to adopt a reduction goal for municipal operations and community emissions that parallel the State commitment to reduce greenhouse gas emissions by approximately* ***15 percent*** *from current levels by 2020.*
- ✓ ***California Public Utility Commission's (CPUC) Long-Term Energy Efficiency Strategic Plan:*** *In 2008, the CPUC adopted California's first Long Term Energy Efficiency Strategic Plan, which is intended to serve as a roadmap to achieve maximum energy savings across all major groups and sectors in California. This document urges local governments to lead by example by "achieving economic energy efficiency, reducing CO2 emissions, and showcasing promising energy efficiency, DSM and renewable products" in their own facilities.*

For the past several years, the City recognizes the importance of leading by example in the community and has taken a number of steps to make the City and its municipal operations more sustainable. This includes participating in the San Gabriel Valley Energy Wise Partnership, which is a partnership between the City, the San Gabriel Valley Council of Governments and Southern California Edison aimed at increasing energy-efficiency in municipal operations. Additionally, the City has taken the following steps to become a leader in sustainability: (list any activities being undertaken by the City):

- ✓ *Developing a Green Action/Climate Action Plan*
- ✓ *Incorporating sustainability principles in the City's General Plan*
- ✓ *Forming a City "Green Team"*
- ✓ *Coordinating community events that bring attention to sustainability issues*
- ✓ *Signing the U.S. Conference of Mayors Climate Protection Agreement*

In accordance with the aforementioned challenges, goals and activities discussed above, the City aims to reduce our impact municipal energy usage, and thereby our impact on climate change, by considering energy-efficiency in all its procurement activities. This procurement policy lists specific product categories and implementation strategies intended to achieve this goal. ***This procurement policy is intended to serve as a living document, meant to change with time, experience, introduction of new technologies and needs as the City progresses toward a sustainable future.***

Section 2 – Policy Elements:
Implementation activities (i.e. products, equipment and activities coved by policy)
After the general section, the commitment should be further specified by products and services.

Sample Policy Language:
When writing the specific objectives, there are two approaches that can be taken:

- **Option 1:** Be specific but without fixing any quantifiable target. An example of such language would be:

  The City will buy or rent energy-efficient computer equipment.

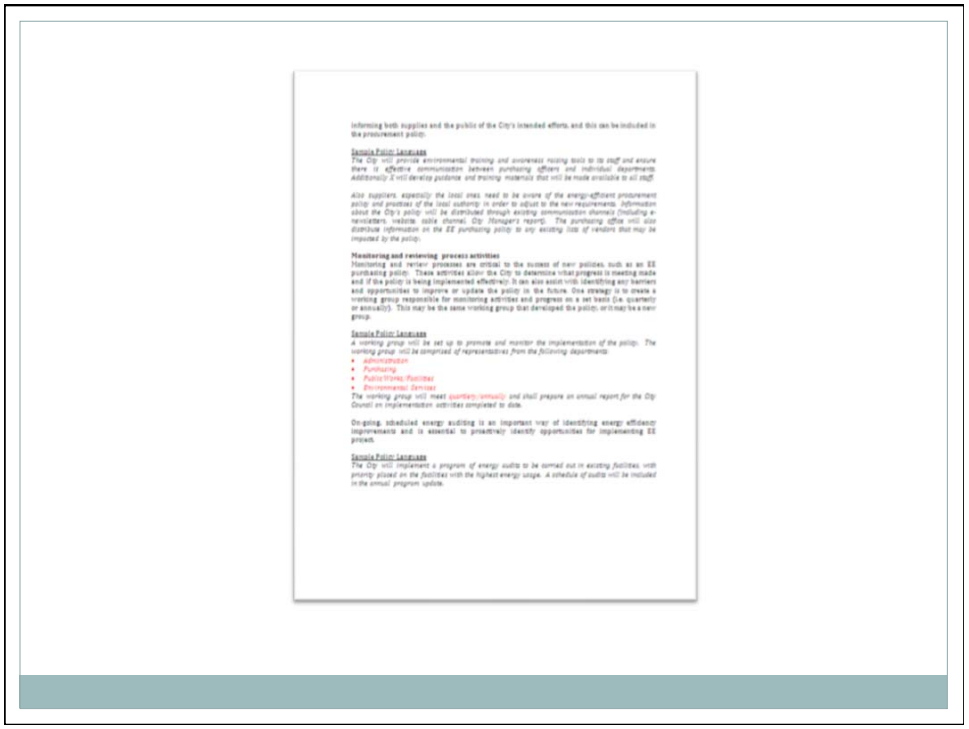
  This formalizes the city's commitment, but avoids the risk of becoming outdated or becoming infeasible due to unforeseen circumstance. However, the lack of quantifiable indicators could make tracking and monitoring progress more difficult.

- **Option 2 (recommended):** Another option is to establish specific targets which the City can works toward achieving. The level of specificity can vary, as can the inclusion of timelines. Examples of such language include:

  The City will maximize its energy-efficiency through its procurement practices as follows:
  - *Replace 25% of computer monitors with ENERGY STAR rated equipment by [YEAR]*
  - *Replace 20% of T-12 lamps with T-8 or lower by [YEAR]*
  - *Install only insulation and windows that exceed existing regulations (i.e. Title 24, California Green Building Code, etc.) related to energy-efficiency by 20%*

Training and Monitoring Activities
Equally important to developing policy objective related to procurement, is identifying implementation measures to ensure that the policy is incorporated into day-to-day procedures. These measures can be independent of the policy and developed separately. However, including them in the policy statement highlights their importance.

Information, communication and training activities
Commitment to the process is necessary from both the 'top-down' (e.g. management and city council) as well as from the bottom-up (e.g. staff responsible for implementing the policy). Training and education are critical to building and maintaining that support. Therefore the policy should include provisions for training sessions and communication/dissemination channels with employees. To maximize accountability, the policy could list specific staff positions that are to be trained. Another critical element of the education campaign is



informing both suppliers and the public of the City's intended efforts, and this can be included in the procurement policy.

Sample Policy Language:
The City will provide environmental training and awareness raising tools to its staff and ensure there is effective communication between purchasing officers and individual departments. Additionally, it will develop guidance and training materials that will be made available to all staff.

Also suppliers, especially the local ones, need to be aware of the energy-efficient procurement policy and practices of the local authority in order to adjust to the new requirements. Information about the City's policy will be distributed through existing communication channels (including e-newsletters, website, cable channel, City Manager's report). The purchasing office will also distribute information on the EE purchasing policy to any existing lists of vendors that may be impacted by the policy.

Monitoring and reviewing process activities
Monitoring and review processes are critical to the success of new policies, such as an EE purchasing policy. These activities allow the City to determine what progress is meeting made and if the policy is being implemented effectively. It can also assist with identifying any barriers and opportunities to improve or update the policy in the future. One strategy is to create a working group responsible for monitoring activities and progress on a set basis (i.e. quarterly or annually). This may be the same working group that developed the policy, or it may be a new group.

Sample Policy Language:
A working group will be set up to promote and monitor the implementation of the policy. The working group will be comprised of representatives from the following departments:
- *Administration*
- *Purchasing*
- *Public Works/Facilities*
- *Environmental Services*

The working group will meet quarterly/annually and shall prepare an annual report for the City Council on implementation activities completed to date.

On-going, scheduled energy auditing is an important way of identifying energy efficiency improvements and is essential to proactively identify opportunities for implementing EE projects.

Sample Policy Language:
The City will implement a program of energy audits to be carried out in existing facilities, with priority placed on the facilities with the highest energy usage. A schedule of audits will be included in the annual program update.

Marketing and Outreach Activities

- Ongoing
  - SGVEWP Website
  - E-newsletter
  - Awards luncheon
- 2010
  - HEP workshops
- 2011
  - Promotion of SCE core programs: HEES, refrigerator/freezer pickups, and direct install
  - Energy Upgrade Contractor Fair
  - Gold Level City recognition