6.6 Energy-Efficient Product Procurement

Part Two: Clean Energy Strategies for Local Governments								
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6.6.1 Overview

Many local governments are saving energy by requiring that the energy-using products they purchase meet energy efficiency criteria. Purchasing energy-efficient products, which operate as effectively as conventional ones, can reduce government facility energy costs by approximately 5% to 10% (LBNL, 2002). In addition to reducing energy costs, energy-efficient product procurement can lower maintenance costs (because energy-efficient products require less-frequent replacement), reduce greenhouse gas (GHG) emissions, and enhance pollution prevention and resource conservation activities. Because energy-efficient product procurement helps reduce energy loads, it can also increase the cost-effectiveness of other energy efficiency activities, such as facility upgrades.

This section highlights local government and community benefits associated with energy-efficient product procurement. It also provides information on how local governments have planned and implemented energy-efficient product procurement programs, sources of funding, and case studies. Additional examples and resources are provided in Table 6.6.3, *Energy-Efficient Product Procurement: Examples and Information Resources* (see page 26).

A Word About Terminology

Local governments can implement energy-efficient product procurement as stand-alone programs or as part of broader programs for purchasing products with a variety of environmental attributes. These programs vary in scope and terminology.

Green purchasing is generally used to describe activities that focus on purchasing products and services that have positive energy and environmental attributes, including energy efficiency, recycled content, and reduced toxic content. Energy-efficient product procurement falls within the scope of green purchasing.

While green purchasing focuses on products that have positive energy or environmental attributes, *environmentally preferable product (EPP) procurement* assesses multiple energy and environmental attributes to determine which of these green product(s) are preferable in a given situation. For example, in a facility with poor indoor air quality, paint with low-volatile organic compound (VOC) content is both green and environmentally preferable, while paint with recycled content latex is green, but not the preferable product in this situation. In most situations, energy-efficient products are considered environmentally preferable.

This section focuses on energy-efficient product procurement. However, green purchasing and EPP procurement programs that include energy efficiency are also addressed.

6.6.2 Benefits of Energy-Efficient Product Procurement

Energy-efficient product procurement activities can produce significant energy, environmental, economic, and other benefits, including:

- *Demonstrate leadership.* Purchasing energy-efficient products can help raise public awareness about the important energy, environmental, economic, and other benefits of energy efficiency, which can lead to broader adoption of energy-efficient practices by local businesses and residents. In addition, by specifying energy-efficient products, local governments can accelerate the development of energy-efficient product markets, leading to increased public demand and lower prices (Harris et al., 2004).

- *Reduce energy costs.* Because energy-efficient products require less energy to operate than conventional products, purchasing these products can reduce facility energy loads and achieve energy bill savings on the order of 5% to 10% (LBNL, 2002). The ENERGY STAR program, a joint initiative administered by EPA and DOE, develops energy efficiency specifications for over 50 product categories. Relative to conventional products, ENERGY STAR-qualified products typically use 25% to 50% less energy and can offer consumer energy cost savings of as much as 90% (U.S. EPA, 2006b; U.S. EPA, 2008). Energy-efficient products can also reduce energy costs indirectly, since they do not generate as much unwanted heat as conventional products, thus lowering cooling energy loads. Table 6.6.1 demonstrates the potential energy cost savings of purchasing energy-efficient products for five product categories.

- *Reduce greenhouse gas (GHG) emissions and other environmental impacts.* Using energy-efficient products reduces the quantity of fossil fuels that are burned to generate energy (U.S. EPA, 2008). Fossil-fueled power plants are responsible for approximately 40% of the nation's emissions of carbon dioxide (CO_2), a GHG, and 67% and 23% of the nation's sulfur dioxide (SO_2) and nitrogen oxide (NO_x) emissions, respectively (U.S. EPA, 2007m). Replacing conventional products with energy-efficient ones can lower a local government's GHG and air pollution emissions. Replacing 100 conventional light bulbs with compact fluorescent light bulbs (CFLs), for example, can reduce nearly 70,000 pounds of CO_2 emissions over a nine-year product lifetime (U.S. EPA and U.S. DOE, 2008). Table 6.6.1 summarizes the potential CO_2 emission reductions from purchasing energy-efficient products for five product categories.

  Many local governments have found that energy-efficient product procurement can be integrated with other environmental activities, such as pollution prevention and resource conservation. Phoenix, Arizona, for example, has incorporated ENERGY STAR-qualified product procurement as part of a broader pollution prevention program (Phoenix, 2007).

- *Increase economic benefits through job creation and market development.* State and local governments spend a combined $50 billion to $70 billion to purchase energy-using products each year (Harris et al., 2004). Specifying that these funds be used to purchase energy-efficient products can stimulate the local economy and encourage development of energy efficiency service markets. According to the Department of Energy (DOE), approximately 60% of the cost of efficiency investments goes to labor costs. In addition, half of all energy-efficient equipment is purchased from local suppliers (U.S. DOE, 2004). For every dollar spent in local economies, energy efficiency generates about $0.55 to $0.85 more economic activity than the payment of energy bills (Hatcher and Dietsche, 2001).

- *Reduce maintenance costs.* Because energy-efficient products, such as CFLs and light-emitting diode (LED) exit signs, often have longer productive lifetimes than less-efficient products, maintenance and replacement cost savings over the lifetime of the product can be significant. LED traffic signals, for example, often require no maintenance throughout their lifetime (which is approximately seven years), while annual maintenance costs for conventional traffic signals can reach as high as $105 per unit (CEE, 2002). Reducing the number of times a product needs to be replaced can be especially important when replacement involves handling valuable or antique items, which can be found in many local government facilities.

- *Increase reliability.* When an energy-using product reaches the end of its usable life and "burns out," there is often a lag time of inactivity before the product can be replaced. Energy-efficient products typically experience less-frequent periods of inactivity because they have longer lifetimes than conventional products. This benefit is particularly important in areas where periods of product inactivity can have serious consequences, such as traffic lighting (U.S. EPA, 2004).

- *Improve occupant health.* Some energy-efficient products remove sources of indoor air contaminants. Energy recovery ventilation equipment, for example, can reduce infiltration of air contaminants from outdoors while significantly reducing a building's HVAC energy load (U.S. EPA, 2003). One study on building performance found that the average reduction in illness as a result of improving air quality in buildings is approximately 40% (Carnegie Mellon, 2005).

Table 6.6.1 Estimated Energy Cost and CO_2 Savings from a Sample of ENERGY STAR Products[a]

Action	Annual Energy Cost Savings	Annual CO_2 Savings (Tons)	Lifetime (years)	Life-Cycle Energy Cost Savings	Life-Cycle CO_2 Savings (Tons)
Replace 5,000 computers and monitors with ENERGY STAR-qualified products and activate power management	$400,000	2,200	4	$1,450,000	13,600
Replace 50 conventional vending machines with ENERGY STAR-qualified products[b]	$7,500	64	14	$79,200	890
Replace 500 incandescent exit signs with ENERGY STAR-qualified LED exit signs	$12,300 in energy costs plus $11,400 in maintenance costs	105	10	$99,900 in energy costs plus $92,200 in maintenance costs	1,045
Replace 10 conventional commercial dishwashers with ENERGY STAR-qualified products	$11,500	400	10	$128,000[c]	6,000
Replace 100 conventional water coolers with ENERGY STAR-qualified coolers	$3,300	28	10	$26,500	280

[a] Figures obtained from calculators on the ENERGY STAR Purchasing & Procurement Web site http://www.energystar.gov/purchasing using default settings and an electricity rate of 9.039¢ per kWh. Annual costs exclude the initial purchase price and installation cost. All costs are discounted over the product's lifetime using a real discount rate of 4%.

[b] Vending machines assumed to have capacities of less than 500 cans.

[c] Value includes water savings.

6.6.3 Energy Efficiency Measures

A Staged Approach to Improving Energy Efficiency

Local governments can achieve substantial benefits from improved energy efficiency by following a staged approach to designing and upgrading buildings. This approach enables organizations to implement energy efficiency measures in steps and achieve greater savings overall. These steps include:

1. *Reduce energy loads*. Purchasing energy-efficient lighting systems, office equipment, building envelope components, and water-efficient fixtures can reduce overall energy loads and reduce unwanted byproduct heat.
2. *Match building systems to reduced energy loads*. Purchasing energy-efficient fan systems and HVAC systems that match reduced energy loads enables a building to meet energy demands at lower energy costs.
3. *Operate and maintain for energy efficiency*. Energy-efficient operations and maintenance ensure that energy-efficient products installed in the first two stages continue to produce benefits.

Source: U.S. EPA, 2004.

There are many opportunities to incorporate energy-efficient products in local government facilities and operations, including:

- *Lighting Systems.* According to the most recent Commercial Buildings Energy Consumption Survey, lighting accounts for over 20% of total energy use in government buildings (U.S. DOE, 2006a). Local governments can improve the energy efficiency of lighting systems by installing energy-efficient products such as CFLs, LED exit signs, and automated lighting controls. An ENERGY STAR-qualified exit sign, for example, can save up to $48 annually on energy and maintenance costs and has a life span up to ten times longer than a conventional exit sign (U.S. EPA, 2007d). Conversions to energy-efficient lighting systems in city buildings throughout Santa Rosa, California have produced energy cost savings of approximately $122,000 per year. At an installed cost of approximately $300,000, this investment will pay for itself in less than three years (Santa Rosa, 2003).[1]

Energy Use in Government Buildings

This table presents average annual energy use by all commercial buildings (any building that is not residential, manufacturing, industrial, or agricultural) owned by federal, state, or local government.*

End Use	Consumption (trillion Btu)**	As Percentage of Whole
Space heating	498	36
Lighting	294	21
Water heating	239	17
Miscellaneous	94	8
Office equipment	78	6
Space cooling	75	5
Ventilation	42	3
Cooking	28	2
Refrigeration	22	2
Total	**1,370**	**100**

* Data are from the 2003 Commercial Buildings Energy Consumption Survey (CBECS) conducted by the Energy Information Administration. The CBECS is currently conducted quadrennially. Data collection for the 2007 CBECS will begin in February 2008.

**Figures are rounded to the nearest trillion Btu.

Source: U.S. DOE, 2006a.

[1] It is important to note that lumen output can be reduced when replacing energy-inefficient lamps with energy-efficient lamps of lower wattage. Thus, in some instances meaning a lamp that uses less energy may not provide adequate lighting and so would reduce product effectiveness.

- *Office Equipment.* Office equipment can account for as much as 6% of a typical government building's total energy consumption (U.S. DOE, 2006). This percentage can be even greater in offices where certain equipment is operated full-time during (and occasionally after) business hours. Energy-efficient product procurement policies often include specifications for energy-efficient computers, scanners, copiers, printers, and water coolers, many of which use up to 50% less energy than conventional products. With sleep settings activated, ENERGY STAR-qualified monitors, for example, can operate on as much as 33% less energy than a conventional monitor (U.S. EPA, 2008e). Medford, Massachusetts has adopted an energy efficiency policy that requires all new equipment to be ENERGY STAR qualified, energy-saving features to be enabled at all times, and all office equipment to be turned off after hours (Medford, 2005).

- *Building Envelope Components.* Local governments can achieve significant energy cost savings by purchasing and installing energy-efficient building envelope components, such as reflective roofing materials, insulation, and windows. These components can lower summertime heat gain, reduce infiltration of outdoor air, and prevent treated air from escaping. In addition, ENERGY STAR-qualified roof products can reduce roof surface temperature by up to 100^{o} F, which can reduce energy bills by as much as 50% and peak cooling demand by 10% to 15% (U.S. EPA, 2008b). Tucson, Arizona reduced the average weekday cooling energy load for one of its government facilities by almost 50% by purchasing and installing an energy-efficient "cool roof" (Gartner, 2002).

- *Water-Using Products.* Heating and pumping water requires a significant amount of energy. For example, an electric water heater requires between 0.1 kWh and 0.2 kWh to heat one gallon of water (e.g., for showers, washing dishes) (U.S. DOE, 2000). According to the American Water Works Association, the energy required to pump purchased water for end use is approximately 0.6 kW per 1,000 gallons distributed (Universities Council on Water Resources, 1999).

  EPA WaterSense Label

  The EPA WaterSense Program labels products that meet water efficiency and performance criteria. Labeling criteria have been established for plumbing fixtures (e.g., toilets and sink faucets), landscape irrigation equipment, and other commercial products. In general, products that receive the WaterSense label are 20% more water-efficient than conventional products.

  Source: U.S. EPA, 2007k; U.S. EPA, 2007l.

  Local governments can save energy by purchasing water-efficient products, such as water fountains, faucets, toilets, and outdoor irrigation equipment. San Francisco's Precautionary Purchasing Ordinance requires city agencies to replace all conventional toilets, which can use up to five gallons of water per flush, with water-efficient ones that require only 1.6 gallons, thus reducing the amount of per-flush energy required for water pumping (San Francisco, 2003; U.S. EPA, 2007).

- *HVAC System Components.* Heating and cooling systems can consume considerable amounts of energy, especially in extreme climates where energy demands on chillers and central heating equipment are greater. DOE estimates that the typical HVAC system accounts for between 40% and 60% of a commercial building's total energy consumption (U.S. DOE,

2006b).[2] Energy-efficient light commercial HVAC equipment[3] can use up to 10% less energy than conventional equipment, translating into savings of approximately $3 to $4 per square foot over the lifetime of the equipment (U.S. EPA, 2002). After passing an energy-efficient product procurement ordinance in 2001, San Diego purchased and installed energy-efficient variable speed drives for HVAC pumps and motors and high-efficiency water chillers at four of its government facilities. These investments have produced energy cost savings of more than $250,000 (San Diego, 2001; San Diego, Undated).

6.6.4 Key Participants

A number of participants can be key in planning and implementing energy-efficient product procurement policies, including:

- *City or County Council.* Elected officials play an important role in planning energy-efficient product procurement activities, since their support is often needed to adopt or modify procurement policies. Local governments have found that gaining the support of higher-level policymakers can also ensure an activity is continuously funded and implemented.

- *Mayor or County Executive.* The mayor or county executive can provide increased visibility for energy-efficient product procurement activities. Often, the initiative for an energy-efficient product procurement policy comes from the executive level. When the mayor or county executive is not the source of the initiative, local governments have found it important to gain his or her support. This can increase public awareness and sustain momentum through the implementation and operation stages.

- *Environment and Energy Departments.* Staff from energy and environment departments can provide critical technical knowledge on the energy and environmental attributes of products. They can also help develop scoring criteria for product alternatives and provide assistance in quantifying and articulating the benefits of energy-efficient product procurement activities. Promoting the energy, environmental, economic, and other benefits of improving energy efficiency and of purchasing energy-efficient products can be an effective way to engage personnel from these departments.

- *Local Government Purchasers.* While the decision to implement energy-efficient product procurement policies is typically made by a higher-level government official, the purchasing department and the individual purchasers are ultimately responsible for ensuring that purchasing policies are enforced. Local governments have found that it is essential to involve purchasers throughout the planning and implementation processes, since their buy-in and understanding of the policy is critical.

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[2] Installing energy-efficient HVAC equipment after reducing energy loads (i.e., in a staged approach) can produce greater energy cost savings.

[3] Light commercial HVAC products cover central air conditioners and heat pumps used in small office buildings, medical facilities, hotels, dorms, military barracks, malls, and other locations. These units use between 65,000 Btu per hour and 250,000 Btu per hour (U.S. EPA, 2002b).

- *Local Government Product Specifiers.* Local government purchasers receive frequent product requests from information technology (IT) departments and facility management departments, since these departments typically require large quantities of electronics and other energy-using equipment. Local governments can work with their IT and facility management departments to ensure that they specify energy-efficient products when possible.

ENERGY STAR Product Savings Calculators

More than 40 product calculators are available that illustrate the cost-effectiveness of selecting ENERGY STAR-qualified products. Purchasers can use these tools to quantify the financial benefits of energy efficiency when making the case for purchasing energy-efficient products to product specifiers.

Calculators can be found at: http://www.energystar.gov/index.cfm?c=bulk_purchasing.bus_purchasing

Source: U.S. EPA, 2007p.

- *Employees, Maintenance Teams, and Other End-Users.* Merely procuring energy-efficient products does not necessarily mean that the products will achieve their projected energy saving potential. Local governments have found that it is important that those individuals who operate and maintain the products do so in a manner that enables the product to perform at maximum efficiency. Providing end-users with information on energy-efficient operations and maintenance activities (e.g., through training sessions) can produce greater energy savings and prolong the usable life of the product. Examples of such activities include enabling the duplex function on copiers, enabling sleep mode on computers, monitors, copiers, faxes, and scanners, and keeping refrigerator coils clean.

- *State Purchasing Agencies.* Local governments sometimes use resources and contacts established by state government purchasers. A number of states allow local governments access to state contracts, which can be used to procure energy-efficient products.

- *Energy Service Companies (ESCOs).* Many local governments work with ESCOs to purchase, install, maintain, and monitor energy-efficient products. Energy-efficient equipment and services can often be obtained through performance contracts, which allow governments to make payments to the ESCO using the energy cost savings generated.

Wisconsin VendorNet System

The Wisconsin VendorNet system serves as the purchasing authority for the state. VendorNet provides cooperative purchasing opportunities for other entities, including counties, cities, and school and utility districts. These entities are provided with access to state bids and contracts through a common Web site that is monitored by the Department of Administration's Energy Division staff. Cooperative purchasing allows state departments and other entities, such as local government, to achieve lower costs through large-volume purchases. Staff members work with purchasing agents to specify ENERGY STAR-qualified products, where available.

Source: Harris et al., 2004.

6.6.5 Mechanisms for Implementation

Local governments have used several mechanisms to establish energy-efficient product procurement policies or modify existing procurement policies to include energy-efficient product specifications, including:

- *City Council or Board of County Commissioners Resolution.* A number of local governments have established energy-efficient product procurement policies through local government resolutions. This mechanism can be particularly effective in making energy-efficient product procurement policies binding and permanent. In addition, a resolution can increase public awareness by providing a clear articulation of a local government's specific energy efficiency goals. Santa Clarita, California used a city council resolution to establish its Environmentally Preferable Product Procurement policy. The policy includes a requirement that agencies specify ENERGY STAR-qualified products, and where ENERGY STAR has not developed specifications agencies must specify products with energy performance in the top 25% of their product type, as designated by the Federal Energy Management Program (FEMP) (Santa Clarita, 2005). The Albuquerque, New Mexico City Council passed a resolution that directs the Department of Finance and Administration and the Energy Conservation Council to develop specifications for city purchases of products that maximize energy efficiency (Albuquerque, 2006).

  Some resolutions have also established programs to provide incentives to local residents and businesses for purchasing energy-efficient products. For example, Lodi, California used a city council resolution to authorize the city manager to provide a public benefits program grant to create and fund a Residential HVAC Rebate Project (Lodi, 2000).

New York City Council Energy-Efficient Products Resolution

The New York City Environmental Purchasing Program was initiated in 1989 with the issuance of a city recycling law that required purchasers to give preference to products with recycled content. In 2003 the city council passed Local Law 30, which required that energy-using products procured by the city be ENERGY STAR qualified.

In December 2005, the city council issued five local laws that addressed EPP procurement, including Local Law 119, which expanded the scope of Local Law 30 by requiring that city agencies purchase products that meet ENERGY STAR specifications. For certain water-using and lighting fixtures, the policy requires that agencies purchase products that meet both Federal Energy Management Program and ENERGY STAR specifications.

Sources: NYC Department of Sanitation, 2007.

Using Model Policies and Resolutions

When developing energy-efficient product procurement policies, many local governments have borrowed from or adapted model policies, such as the National Association of Counties model resolution for purchasing EPPs. http://www.newdream.org/procure/start/resolution.pdf

Some county governments have developed model energy-efficient procurement policies with resources for local governments within the county. Alameda County, California has developed a model procurement policy and implementation guidance to assist local governments in its jurisdiction. The policy includes specifications for ENERGY STAR-qualified products. Several California communities, including Oakland and Santa Clarita, have adopted the model.

Sources: Alameda County, 2003; Santa Clarita, 2005; Oakland, 2007.

- *Executive's Initiative.* In some local governments, the mayor or county executive has been the source of an energy-efficient product procurement policy. In 2007, for example, the Raleigh, North Carolina mayor announced the "LED City" project, an initiative to install LED light bulbs in city parking garages, buildings, sports fields, and streetlights. The mayor has pledged the city's commitment to present the benefits of energy-efficient LEDs to businesses and residents at conferences and other information sessions (Raleigh, 2007). In Lansing, Michigan, the mayor issued an executive order in 2007 directing all local government agencies to purchase ENERGY STAR-qualified products (Lansing, 2007).

- *Local Government Planning Process.* Some local governments have incorporated energy-efficient product procurement goals into planning documents. Other local governments have produced plans for implementing energy-efficient product procurement activities. In some instances, local governments have included energy-efficient product procurement goals in climate action plans. Philadelphia, Pennsylvania adopted a Local Climate Action Plan that requires all bid solicitations and public works and equipment requests for proposals (RFPs) to include specifications for purchasing ENERGY STAR-qualified products and energy-efficient premium electric motors (Philadelphia, 2007).

Some local governments have modified or designed procurement policies to give preference to energy-efficient products. Strategies used to modify procurement policies include:

- *Allow price flexibility.* Some local governments, while encouraging purchasers to identify least first-cost opportunities, allow a certain degree of flexibility to pursue energy-efficient options. Nevada County, California's purchasing policy, for example, uses language that provides purchasers with the flexibility to balance energy, environmental, and financial concerns by allowing the procurement of EPPs that are not "unreasonably expensive" (Alameda County, 2003). Santa Monica, California uses the term "lowest responsible bid" as opposed to "lowest bid" in its Environmentally Preferable Purchasing policy (SCCED, 2000).

- *Establish price preferences.* Local governments have used price preferences to increase the price they are willing to pay for energy-efficient products. A price preference is a specified percentage (typically 5% to 15%) that a local government will allow the price of an energy-efficient product to exceed the cost of a conventional product and still give equal consideration. In this way, price preferences can place energy-efficient products with cost premiums on level ground with conventional products and thus overcome least-first cost requirements. A city ordinance in Kansas City, Missouri, for example, allows purchasers to assign a price preference for EPPs of up to 15%. This means that environmentally preferable products that are up to 15% more expensive than conventional products can still meet least-cost requirements (Kansas City, Undated).

- *Require life-cycle cost accounting.* Local governments can use life-cycle cost accounting to make energy-efficient

Ensuring Clarity of Energy-Efficient Product Procurement Policy Language

While senior officials may be responsible for issuing energy-efficient product procurement policies, lower-level employees are often responsible for ensuring that these policies are implemented effectively and continue to produce results. Ambiguous definitions of "energy-efficient" or "environmentally preferable" products can result in inconsistency, especially in governments where procurement activities are decentralized. It is important to ensure that policy language is clear and consistent so that it will be effective.

Source: Case, 2004.

Focusing on Life-Cycle Costs

Some local governments have policies that require purchasers to use a least first-cost approach when selecting products. Least-cost requirements can present an implementation barrier for energy-efficient product procurement, since energy-efficient products can have slightly higher initial costs. When initial costs of energy-efficient products are higher than the costs of conventional products, local governments have found it is important to consider the life-cycle cost savings of the energy-efficient products. Over the product's lifetime, an energy-efficient product almost always has lower energy and maintenance demands. These benefits typically offset any initial cost premium.

products competitive with conventional products when making purchasing decisions. A number of local governments, such as Boulder, Colorado, have authorized purchasers to use life-cycle cost accounting to procure products that may have higher initial costs but lower total costs over their lifetime (Case, 2004).

6.6.6 Implementation Considerations

When implementing energy-efficient product procurement programs, local governments have used several approaches to enhance program effectiveness. Some of these approaches are fundamental to establishing most energy-efficient product procurement programs (Tier One Implementation Considerations), while others are more advanced features that can be incorporated into program plans to achieve enhanced benefits (Tier Two Implementation Considerations).

Tier One

- *Borrow from sample procurement language.* Local governments can use model contract language to specify energy-efficient products when making purchases. Model contract language can be borrowed from other local and state governments, federal government agencies, and non-governmental organizations. Both ENERGY STAR and FEMP, for example, provide general procurement contract language for purchases of energy-efficient products (U.S. EPA, 2008c; FEMP, 2007).

- *Collect baseline information on energy consumption.* Collecting baseline energy consumption information before establishing energy-efficient product procurement policies can help local governments identify their best opportunities for capturing energy cost savings. For example, local governments can focus on replacing particularly inefficient products or eliminating energy-wasteful practices (such as leaving lights on during non-work hours). By assessing baseline information, local governments can also identify specific agencies that would benefit most from energy-efficient products, or agencies that could be

Implementation Considerations

Implementation considerations for energy-efficient product procurement programs can be divided into two tiers: Tier One approaches are fundamental to establishing most energy-efficient product procurement programs, while Tier Two approaches are more advanced and can lead to enhanced benefits.

Tier One

- Borrow from sample procurement language
- Collect baseline information on energy consumption
- Create strong links between the Purchasing Department and Energy, Environment, and IT Departments
- Develop a list of pre-approved or priority products
- Ensure proper end-of-life management
- Initiate pilot activities
- Involve employees, maintenance teams, and other end-users
- Use energy efficiciency standards and specifications

Tier Two

- Aggregate purchases
- Combine energy-efficient product procurement with other energy efficiency activities
- Develop scoring guidance
- Engage the community
- Integrate multiple energy and environmental goals

expected to most easily adapt to the new policy. Baseline information can be collected through surveys and questionnaires of government purchasers.

- *Create strong links between the Purchasing Department and Energy, Environment, and IT Department(s).* Fostering collaboration between these departments can significantly enhance the benefits of energy-efficient product procurement activities, by bringing together individuals with technical expertise in complementary subjects. Purchasers, who have familiarity with vendors and purchasing procedures, can consult with energy and environment staff to identify priority energy-efficient products and to quantify the benefits of energy-efficient product procurement policies (e.g., by using ENERGY STAR's product savings calculators). Purchasers can also work with staff from IT and facilities management departments who are often responsible for specifying office electronics and for implementing energy efficiency policies, such as enabling sleep modes on office electronic equipment.

- *Develop a list of pre-approved or priority products*. When vendors use different definitions of "energy-efficient" and "environmentally preferable," purchasers are required to spend time analyzing the relative attributes of each product. Some local governments have addressed this barrier and improved the effectiveness of their energy-efficient product procurement by developing a list of pre-approved or priority products. The Kitsap County, Washington Prevention of Waste in County Government ordinance, for example, requires the county purchasing division to develop a preferred product database to be used by each government agency (Kitsap County, 1999). In addition to streamlining the purchasing process, having a list of pre-approved products and vendors can enable purchasers to aggregate orders, which can sometimes lead to lower costs.

- *Ensure proper product end-of-life management.* When local governments purchase new or alternative products, they must decide what to do with replaced products. Many local governments have instituted policies for donating or recycling replaced electronics. These policies often require purchasers to include "take back" language in procurement contracts and leasing agreements that obligate the product vendor to take back the replaced equipment (CIWMB, 2003).[4] Tacoma, Washington, for example, has partnered with Pierce County to develop the Take it Back Network, a partnership between government agencies, retailers, and recyclers, to provide consumers with opportunities to conveniently recycle electronics (Tacoma, 2006). Santa Clarita, California's Environmentally Preferable Purchasing policy includes a requirement that vendors who install energy-efficient lighting must recycle the lighting fixtures and lamps that are removed (Santa Clarita, 2005).

- *Initiate pilot projects.* Local governments can consider initiating pilot or demonstration projects to help identify priority products, best practices for ordering, and potential implementation challenges. Certain departments or agencies, such as an energy, environment, or IT department, may be the best equipped to implement pilot projects. Pilot projects can begin by focusing on one type of product, gradually incorporating multiple product types as purchasers collect sufficient knowledge to apply the project on a broader scale (NACo,

[4] Local governments can go a step further by requiring a vendor to guarantee that the replaced product will be re-manufactured in some form (CIWMB, 2003).

Undated). For example, Redondo Beach, California initiated a pilot project that involved installing energy-efficient products in city facilities for a trial period of 60 to 90-days. The city negotiated to have the installations performed at no cost and used the trial period to determine whether the energy cost savings were sufficient to consider longer-term contracts for the products (Flex Your Power, 2002b).

- *Involve employees, maintenance teams, and other end-users.* Involving these individuals in the policy planning process will ensure that energy-efficient product procurement activities account for the special needs of those who will use and maintain the equipment, which can lead to increased buy-in. In addition, training the individuals who will use and maintain energy-efficient products can ensure that energy-efficient features are enabled, prolong the life of the products, and increase energy cost savings as a result of appropriate product use (NACo, Undated). When Santa Monica, California adopted its Environmentally Preferable Purchasing program, the city provided its employees with training and education opportunities that helped increase motivation and participation (SCCED, 2000).

- *Use energy efficiciency standards and specifications.* Many local governments use federal standards or third-party certification for energy-efficient products. Using established standards streamlines the procurement process and can lead to greater energy benefits, since products will be required to meet minimum performance specifications. A number of local governments require purchasers to specify ENERGY STAR-qualified products. ENERGY STAR has developed energy efficiency specifications for more than 50 product categories. For some categories where ENERGY STAR specifications do not exist, FEMP identifies energy-efficient products that perform in the top 25% in terms of energy performance (FEMP, 2007).[5]

ENERGY STAR Qualification

The ENERGY STAR Program has developed specifications for energy efficient products in more than 50 product categories. EPA and DOE work together to develop unique energy performance specifications that a product must meet to qualify. ENERGY STAR-qualified products typically use 25% to 50% less energy and can offer consumers energy cost savings as high as 90% over conventional products.

Local governments often include requirements in energy-efficient product procurement policies for purchasers to specify products that are ENERGY STAR qualified. Washington, D.C., for example, passed an act in 2004 to amend its procurement policy to require agencies to include specifications for ENERGY STAR-qualified products in solicitations for energy-using products.

Source: U.S. EPA, 2006b; U.S. EPA, 2008; LBNL, 2003; Washington, D.C., 2004.

In addition to national standards like ENERGY STAR, some local governments have established their own energy efficiency specifications. Multnomah County, Oregon contracted with engineers to develop energy efficiency standards for several products. These standards were submitted to a specification writer who developed procurement specifications for the standards (NACO, Undated).

[5] FEMP's specifications are consistent with ENERGY STAR's in categories where ENERGY STAR specifications exist (FEMP, 2007).

Tier Two

- *Aggregate purchases.* By combining the needs of multiple departments, or even multiple jurisdictions, local governments can potentially negotiate with vendors for reduced or wholesale prices. By partnering with other governments, local governments can pool resources and experience, and take advantage of the different areas of expertise between staffs. In addition to improving the feasibility of energy-efficient product procurement activities, these partnerships can increase public awareness and have a greater influence on market demand for energy-efficient products. Some states, such as Wisconsin, allow local governments to use state government contracts to aggregate purchases (Harris et al., 2004).

- *Combine energy-efficient product procurement with other energy efficiency activities.* Even the most effectively implemented energy-efficient product procurement activities can be improved by integrating procurement activities into comprehensive energy efficiency programs. This can be especially true when equipment is right-sized to meet the functional requirements of a building's conditioning systems, since over-sized equipment uses more energy when operating and tends to cycle on-off more frequently, which can potentially increase maintenance costs (Harris et al., 2004).

- *Develop scoring guidance.* Purchasers often must select between comparable products, weighing their relative energy and environmental attributes (e.g., energy efficiency, water conservation, material waste reduction) before making a decision (U.S. EPA, 2000). This process can be time-intensive, and without adequate guidance can lead to inconsistent purchasing practices across government agencies. Developing a scoring sheet that incorporates these issues can assist purchasers in making consistent decisions.

San Francisco Product Scoring

The San Francisco Precautionary Purchasing Ordinance, passed in 2005 requires agencies to purchase only city-approved environmentally preferable products (EPPs).

To help implement this policy, the city Department of the Environment and Office of Contract Administration worked together to develop lists of EPPs for product categories of highest environmental priority. In developing these targeted product lists, the agencies held three public meetings to establish a set of eleven energy and environmental criteria for comparing products. For example, efficient use of resources and minimal impacts on global environment, was a criterion.

These criteria, along with a set of implementation issues (e.g., savings potential), were used to create a score sheet that assesses points for each product. Those that earned the best scores in their category were added to the lists of approved products.

Source: SF Environment, 2006; SF Environment, 2007b.

- *Engage the community.* Local governments can improve awareness about the benefits of energy-efficient product procurement by engaging local businesses and residents. A number of local governments have implemented energy-efficient procurement activities that involve community outreach components. Arlington County, Virginia's *Arlington Initiative to Reduce Emissions (AIRE),* for example, is a collaborative started by the county government that encourages county businesses, organizations, and individuals to reduce emissions. AIRE assists members in partnering with ENERGY STAR and obtaining ENERGY STAR-qualified products (AIRE, Undated). Scottsdale, Arizona offers free public seminars on energy-efficient products as part of its Green Building Program (Scottsdale, 2007).

Some local governments, such as Austin, Texas and Riverside, California, have enhanced the community-level benefits of energy-efficient product procurement activities through programs that provide financial assistance to residents for obtaining energy-efficient products (Austin Energy, 2007; Riverside, 2007). The village of Akron, New York established an ENERGY STAR Appliance Advantage Program that provides the municipal electric utility's customers with rebates of up to $125 for purchasing ENERGY STAR-qualified home appliances (Akron, 2007). Local governments can also use their purchasing power to obtain energy-efficient products in bulk at reduced prices. These products can then be sold to residents and businesses at below-market costs (Flex Your Power, 2002).

- *Integrate multiple energy and environmental mandates.* When developing and implementing energy-efficient product procurement policies, many local governments have combined energy efficiency goals with other environmental goals to produce a comprehensive program. This approach can make energy-efficient product procurement policies more enticing to elected officials and help ensure continuous high-level support (Harris et al., 2004). This approach also helps to make sure that energy-efficient product procurement does not conflict with other environmental or socio-economic purchasing goals and requirements. For example, procurement policies can include specifications that printers and copiers be ENERGY STAR qualified and also be capable of duplexing to minimize paper use.

6.6.7 Costs and Funding Opportunities

While energy-efficient products can typically be purchased at no additional cost, local governments sometimes find that energy-efficient products have a cost premium. This section provides information on the cost of implementing energy-efficiency product procurement activities and describes funding opportunities for addressing cost premiums.

Costs

Local governments typically implement energy-efficient product procurement at low- or no-cost simply by purchasing energy-efficient products on the same replacement schedule they would otherwise purchase conventional replacements. The cost of energy-efficient product procurement is typically only as great as the cost premium for energy-efficient products compared to conventional ones. For many products, such as office equipment and electronics, there is no cost premium, making energy-efficient product procurement an especially cost-effective clean energy activity.

Other energy-efficient products, such as refrigerators, freezers, HVAC systems, and lighting fixtures, do have a cost premium. This cost premium, however, is almost always offset by energy cost savings within a few years. Table 6.6.2, *ENERGY STAR Specification Overviews: Unit Savings and Cost-Effectiveness* provides information on a sample of ENERGY STAR-qualified products, including energy savings and payback periods. For most of the products identified in the table, there is typically no cost premium and thus no payback period.

Table 6.6.2 ENERGY STAR Specification Overviews: Energy Savings and Payback Periods			
Product Category	**Effective Date of Current Specification[a]**	**Percent Energy Savings Compared to Conventional Product**	**Payback Period**
Appliances			
Dehumidifiers	October 2006	15%	0 years (typically no retail cost premium)
Dishwashers	January 2007	40%	0 years (typically no retail cost premium)[b]
Refrigerators and freezers	April 2008	15%	4 years (refrigerators)[c] 6 years (freezers)[d]
Room air conditioners	November 2005	10%	Not available[e]
Room air cleaners	July 2004	45%	0 years (typically no retail cos premium)
Electronics			
Battery charging systems	January 2006	35%	0 years (typically no retail cost premium)
Cordless phones	November 2006	55%	0 years (typically no retail cost premium)
Combination units	July 2005	30%	0 years (typically no retail cost premium)
DVD products	January 2003	60%	0 years (typically no retail cost premium)
External power adapters	January 2005	35%	0 years (typically no retail cost premium)
Home audio systems	January 2003	60%	0 years (typically no retail cost premium)
Televisions	November 2008	25%	0 years (typically no retail cost premium)
Envelope			
Roof products	December 2007	Not available	< 4 years
Windows, doors, and skylights	September 2005	Not available	Not available
Lighting			
Compact fluorescent lamps	January 2004	75%	< 1 year[f]
Residential-style light fixtures	August 2008	75%	< 1 year 2 years for recessed cans
Office Equipment			
Computers	July 2007	25% - 50%	0 years (typically no retail cost premium)
Copiers	April 2007	65%	0 years (typically no retail cost premium)
Monitors	July 2007	25%	0 years (typically no retail cost premium)

Table 6.6.2 ENERGY STAR Specification Overviews: Energy Savings and Payback Periods			
Product Category	**Effective Date of Current Specification[a]**	**Percent Energy Savings Compared to Conventional Product**	**Payback Period**
Multifunction Devices	April 2007	20%	0 years (typically no retail cost premium)
Printers, fax machines, and mailing machines	April 2007	15%	0 years (typically no retail cost premium)
Scanners	April 2007	50%	0 years (typically no retail cost premium)
Heating and Cooling			
Air source heat pumps	April 2006	5%	< 5 years
Boilers	April 2002	5%	< 1 year
Ceiling fans	September 2006	45%	0 years (typically no retail cost premium)
Furnaces	October 2006	15%	< 3 years
Geothermal heat pumps	April 2001	30%	< 5 years for new construction
Light commercial HVAC	January 2004	5%	< 1 year
Ventilating fans	October 2003	70%	0 years (typically no retail cost premium)
Commercial Food Service			
Commercial dishwashers	October 2007	30%	2 years
Commercial fryers	August 2003	15%	2 years (for typical unit)
Commercial hot food holding cabinets	August 2003	65%	2 years
Commercial ice makers	January 2008	25% - 30%	4 years (for typical unit)
Commercial solid door refrigerators and freezers	September 2001	35%	1 year
Commercial steam cookers	August 2003	50%	0 years (typically no retail cost premium)
Other			
Water coolers	May 2004	45 %	0 years (typically no retail cost premium)
Vending machines	April 2004 August 2006 (rebuilt machines)	40 %	< 1 year

Table 6.6.2 ENERGY STAR Specification Overviews: Energy Savings and Payback Periods			
Product Category	**Effective Date of Current Specification[a]**	**Percent Energy Savings Compared to Conventional Product**	**Payback Period**

[a] ENERGY STAR develops performance-based specifications to determine the most energy-efficient products in a particular product category. These specifications, which are used as the basis for ENERGY STAR qualification, are developed using a systematic process that relies on market, engineering, and pollution savings research and input from industry stakeholders. Specifications are revised periodically to be more stringent, which has the effect of increasing overall market energy efficiency (U.S. EPA, 2007o).

[b] U.S. EPA and U.S. DOE, 2007c.

[c] U.S. EPA and U.S. DOE, 2007b.

[d] U.S. EPA and U.S. DOE, 2007.

[e] U.S. EPA and U.S. DOE, 2007d.

[f] U.S. EPA and U.S. DOE, 2008.

Source: U.S. EPA, 2008d.

Funding Opportunities

Local government funding opportunities for energy-efficient product procurement include:

- *Energy Conservation Savings.* Local governments can use a "paid from savings" approach to finance purchases of energy-efficient products that have cost premiums by reserving energy cost savings generated from their energy efficiency activities to pay for energy-efficient products. In 1984, Phoenix, Arizona established an Energy Conservation Savings Reinvestment Plan. A reinvestment fund was created using money collected from a state oil overcharge. Under the reinvestment plan, half the city's annual energy cost savings from energy efficiency improvements funded through the plan are reinvested in the fund to provide for future improvements. The fund has been used to finance the costs of new energy-efficient equipment in city buildings (ICLEI, 2007).

- *Lease-Purchase Agreements.* A tax-exempt lease-purchase agreement (also known as a municipal lease) allows public entities to finance purchases and installation over long-term periods using operating budget dollars rather than capital budget dollars. Boulder, Colorado uses operating budget dollars and capital investment plan funds (which are designed to automatically fund upgrades at the end of a piece of equipment's useful life)

Cash Flow Opportunity Calculator

The ENERGY STAR Cash Flow Opportunity Calculator is a decision-making tool that can be used to inform decisions pertaining to the timing of energy-efficient product purchases. The tool can be used to determine:

- The quantity of energy-efficient equipment that can be purchased and financed using anticipated savings;
- Whether it is most cost-effective for the purchase to be financed now, or to be paid for using future operating funds; and
- Whether money is being lost while waiting for a lower interest rate.

Web site: http://www.epa.gov/Region8/humanhealth/children/2003/CashFlowEnergyPerfEnvProtection.pdf

Source: U.S. EPA, 2003b.

Benefits of Tax-Exempt Lease Purchase Agreements

- No need for capital budget appropriation
- No delay for voter referendum
- Monetary obligation limited to current budget period
- Reduced interest rates
- Can be used to underwrite guaranteed savings performance contracts
- Repayment can be tied to energy cost savings

to pay for energy-efficient equipment purchased through lease-purchase agreements (Colorado Energy, 2007).

Westminster, Colorado – Lease-Purchase Agreement

The city council in Westminster, Colorado passed a resolution in 2005 that authorized the city to enter into a lease-purchase agreement to purchase and install approximately $2.5 million in energy-efficient equipment in 21 city facilities. The city issued a request for proposals for financing bids for the project and the city was able to settle on a lease-purchase agreement with a low interest rate of 3.79%. The city council considered cash funding the purchase, but determined that capital improvement budget constraints would mean that the project would have to be implemented piecemeal over eight to twelve years.

Source: Westminster, 2005.

Lease-purchase agreements typically include "non-appropriation" language that limits obligations to the current operating budget period. If a local government decides not to appropriate funds for any year throughout the term, the equipment is returned to the lessor and the agreement is terminated. Because of this non-appropriation language, lease-purchase agreements typically do not constitute debt. Under this type of agreement, a local government makes monthly payments to a lessor (often a financial institution) and assumes ownership of the equipment at the end of the lease term, which commonly extends no further than the expect life of the equipment. These payments, which are often less than or equal to the anticipated savings produced by the energy efficiency improvements, include added interest. The interest rates that a local government pays under these agreements are typically lower than the rates under a common lease agreement because a public entity's payments on interest are exempt from federal income tax, meaning the lessor can offer reduced rates (U.S. EPA, 2004b).

Unlike bonds, initiating a tax-exempt lease-purchase agreement does not require voter referendum to approve debt, a process that can delay energy efficiency improvements. Tax-exempt lease-purchase agreements typically require only internal approval and an attorney's letter, a process that often takes only one week (as opposed to months or years for bonds). Local governments can expedite the process by adding energy efficiency projects to existing tax-exempt lease-purchase agreements. Many local governments have master lease-purchase agreements in place to finance a range of capital investment projects. Energy-efficient product procurement can often be added to these agreements without difficulty (U.S. EPA, 2004b).

- *Performance Contracting.* An energy performance contract is an arrangement with an ESCO that bundles together various elements of an energy-efficiency investment, such as installation, maintenance, and monitoring of energy-efficient equipment. These contracts, which often include a performance guarantee to ensure the investment's success, are typically financed with money saved through reduced utility costs but may also be financed using tax-exempt lease-purchase agreements (U.S. EPA, 2003c). Compton, California entered a performance contract to install energy-efficient equipment in a number of its facilities, including new lighting systems with occupancy sensors, street lighting fixtures, chillers, and energy efficiency management controls. The performance contract, which will be paid for with guaranteed energy efficiency savings, is expected to produce savings of more than $4.4 million over 15 years (Johnson Controls, 2007).

Tax-exempt lease-purchase agreements are sometimes used to underwrite energy performance contracts with ESCOs. While local governments can often obtain financing directly from an ESCO, many have found that the interest rates available through tax-exempt lease-purchase agreements are typically lower than the rates offered by an ESCO. Tax-exempt lease-purchase agreements can be especially effective when used to underwrite energy performance contracts that include guaranteed savings agreements, under which an ESCO agrees to reimburse any shortfalls in expected energy cost savings.

Tax-Exempt Lease Purchase Agreements and Energy Performance Contracting

The Miami-Dade County Public Schools district financed energy-efficient equipment installations in its facilities at a reduced cost by adding guaranteed savings energy performance contracts with three ESCOs to an existing tax-exempt master lease-purchase agreement, rather than financing the projects directly through the ESCOs. Through the master lease-purchase agreement, the school district has invested $9.5 million in energy efficiency. The investments produced savings of $3.5 million after just three years.

Sources: U.S. EPA, 2003d; U.S. EPA, 2004b.

- *Private Foundations*. Foundations are nonprofit organizations or charitable trusts that can help fund local energy efficiency activities. The most common types of financing include grants (which do not have to be repaid) and program-related investments (which are usually set up with a repayment schedule). The Illinois Clean Energy Community Foundation, for example, administers seven indoor lighting programs that provide grants to local government entities, including schools, county courthouses, and public safety facilities, to assist in purchasing and installing energy-efficient lighting systems (ICECF, 2007).

- *Public Benefits Funds.* Public benefits funds (PBFs) are funds that are supported by system benefits charges applied to utility customers bills. These funds, which are used to invest in programs that benefit the public, can provide funding for local government energy-efficient product procurement. A number of local governments have partnered with state PBF-funded programs to purchase energy-efficient products. Tigard, Oregon received a rebate from the PBF-funded Energy Trust of Oregon to help offset the cost of purchasing energy-efficient equipment (Tigard, 2007).

- *State Programs.* Some states administer programs that provide technical and financial assistance to local governments for purchasing energy-efficient products. The Mississippi Energy Division, for example, administers an Energy Efficiency Lease Program that offers local governments access to pre-arranged tax-exempt lease-purchase agreements with third-party financiers. These agreements can be used to finance purchases and installation of energy-efficient equipment for terms of up to ten years (Mississippi, 2005).

- *Utility Assistance.* A number of electric utilities offer assistance to local governments through energy efficiency programs. These programs sometimes allow local governments to obtain energy-efficient products at reduced costs or to purchase and install energy-efficient products at no up-front cost. Public Service of New Hampshire, for example, administers a Municipal Smart Start Loan Program through which it purchases and installs energy-efficient products for local governments. The governments are assessed a purchase and installation charge on their monthly utility bill until the products and services are paid off. This charge is designed to be less than the cost savings generated from the energy efficiency investments.

Claremont, New Hampshire used this program to purchase energy-efficient T8 lighting systems with occupancy sensors, LED exit signs, and over 1,000 streetlights (NEEP, 2006).

6.6.8 Interaction with Federal, State, or Regional Programs

A variety of federal, state, and regional agencies and organizations provide resources that local governments can use when planning and implementing energy-efficiency product procurement activities.

Federal Programs

- *ENERGY STAR.* The U.S. EPA's ENERGY STAR Purchasing and Procurement program can assist local governments in identifying and procuring products that meet ENERGY STAR energy efficiency qualifications. The program provides lists of energy-efficient products with performance specifications, product savings calculators for assessing the cost-effectiveness of purchasing these products, sample procurement language, product retailer locators, and case studies. In addition, the program provides guidance on developing a comprehensive energy-efficient product procurement policy.

  Web sites:
  http://www.energystar.gov/purchasing http://www.energystar.gov/index.cfm?c = bulk_purchasing.bus_purchasing_key_benefits#case_studies (case studies)
  http://www.energystar.gov/index.cfm?c = bulk_purchasing.pr_proc_generic (sample procurement language)
  http://www.energystar.gov/index.cfm?c = bulk_purchasing.bus_purchasing (savings calculators)
  http://www.energystar.gov/index.cfm?fuseaction = store.store_locator (retailer locator)
  http://www.energystar.gov/index.cfm?c = prod_development.prod_development_index (product specifications)

- *EPA's Environmentally Preferable Purchasing Program.* This EPA program encourages purchasers to consider the multiple types of environmental impacts of the products they purchase. The program's Web site provides tools and information resources to assist purchasers in selecting EPPs. The program has developed an Environmentally Preferable Purchasing Database that provides information on products and services arranged by category.

  Web site: http://www.epa.gov/epp/index.htm

- *EPA's WaterSense Program.* WaterSense is a voluntary EPA program that encourages efficient use of the nation's water resources. WaterSense has developed a system for labeling water-using products and services that meet EPA water efficiency standards. WaterSense-labeled products typically use 20% less water than conventional products.

  Web site: http://www.epa.gov/watersense/index.htm

- *DOE's Federal Energy Management Program (FEMP).* The FEMP program works with federal agencies to increase energy efficiency, water conservation, and use of renewable

energy sources in federal government operations. Local government purchasers can obtain guidance from FEMP's many information resources, including its Product Energy Efficiency Recommendations publication, which contains energy efficiency fact sheets that can be used when reviewing energy-efficient products and developing preferred product lists.

Web site: http://www1.eere.energy.gov/femp/program/equip_procurement.html

State Programs

Many state governments have adopted energy-efficient product procurement policies and have collected information on product performance, purchasing best practices, and implementation challenges. Local governments can build on the knowledge collected through these state government activities. In Texas, the State Energy Conservation Office (SECO) provides local governments with assistance in improving energy efficiency in local government facilities and operations through its Energy Efficiency Partnership. SECO offers information resources and technical assistance on purchasing energy-efficient equipment, including assistance with developing energy efficiency standards for product categories (SECO, 2007).

New York State Local Government Energy-Efficient Product Procurement

As part of its Energy $mart initiative, NYSERDA administers the New York State Local Government Energy-Efficient Product Procurement Program (GEEP-NY) to provide local government officials with tools, education, and guidance to assist them in purchasing or leasing ENERGY STAR equipment. These resources include fact sheets, case study briefs, demonstration projects, an electronic resource center, a model for estimating savings potential, and a "how-to" guide and PowerPoint briefings.

Source: GEEP-NY, Undated.

Other Programs

- *Center for a New American Dream.* The Center for a New American Dream is a non-profit organization dedicated to promoting responsible consumption. The organization has developed a clearinghouse of information resources, including case studies and model policies, for EPP procurement at the institutional level. The Center has also developed the Responsible Purchasing Network, a member-based network of procurement stakeholders, to promote EPP purchasing. The Network can provide several types of resources, including purchasing guides, discussion forums, and numerous publications.

  Web sites: http://www.newdream.org/procure/ (Center for a New American Dream) and http://www.responsiblepurchasing.org/ (Responsible Purchasing Network)

- *Environmentally Preferable Products Procurement Listserv (EPPnet).* The EPPnet listserv was established by the Northeast Recycling Council, a ten-state collaborative for research and development of recycling activities. The listserv links federal, state, and local environmental officials with procurement specialists to provide subscribers with access to information on product specifications, vendors, pricing information, and procurement strategies for EPPs.

  Web site: http://www.nerc.org/eppnet/index.html

- *National Association of Counties (NACo).* NACo administers a number of energy-related initiatives through its Green Government project, including a Purchasing and Recycling

program. The Purchasing and Recycling program offers educational resources, information on upcoming events and training opportunities, and information about related programs, such as the U.S. Communities Government Purchasing Alliance.

Web site: http://www.naco.org/GreenTemplate.cfm?Section = Purchasing_and_Recycling&Template = /TaggedPage/TaggedPageDisplay.cfm&TPLID = 88&ContentID = 24094

- *National Association of State Procurement Officials.* The National Association of State Procurement Officials (NASPO) is a non-profit organization that works with purchasing officials in state government by encouraging information exchange to achieve increased efficiency and effectiveness in national purchasing activities. The organization has collected many resources that local governments can use to implement energy-efficient product procurement programs, including information materials and sample projects.

  Web site: http://www.naspo.org/

- *Regional Purchasing Cooperatives.* Regional cooperative purchasing alliances can provide local governments with information resources and opportunities to aggregate purchases. These cooperatives, which can be on a regional or interstate level, often produce qualified product lists that include energy-efficient products. The Kansas City Regional Purchasing Cooperative, for example, is a joint cooperative between the Mid-America Regional Council, the Mid-American Council of Public Purchasing, and local governments in the Kansas City, Missouri region that aggregates purchases through shared contracts to obtain reduced prices (KCRPC, 2007). The Western States Contracting Alliance, an interstate cooperative, allows governments from participating states to take advantage of reduced prices through cooperative purchasing (WSCA, 2007).

National Institute of Governmental Purchasing

The National Institute of Governmental Purchasing, Inc. provides education and training resources for purchasers from public entities across the nation. As part of its resource dissemination, the organization maintains a list of many of the nation's purchasing cooperatives (http://www.nigp.org/PurchCoop.htm).

Source: NIGP, 2007.

6.6.9 Case Studies

The following case studies describe two comprehensive programs for implementing energy-efficient product procurement activities. Each case study describes how the program was initiated, key program activities and features, and program benefits.

King County, Washington – Environmental Purchasing Program

Since its inception in 1989 as an initiative to promote use of recycled materials, the King County, Washington Environmental Purchasing Program has developed into a comprehensive purchasing program that incorporates a broad range of energy and environmental goals.

Program Initiation

In 1989, the Metropolitan King County Council established the Recycled Product Procurement Policy. This policy included rules and regulations for county agency procurement of paper products and lubricating and fuel oils. The King County Environmental Purchasing Policy, adopted in 1995, expanded the existing procurement policy and included explicit direction to the county's purchasing and solid waste divisions to provide government entities with technical assistance in purchasing EPPs whenever it is cost-effective and practicable to do so (King County, 1995). In 1999, the program issued a bulletin requiring that bid documents for computer systems, monitors, printers, copiers, fax machines, and scanners include language specifying ENERGY STAR qualification. The program has found that the low cost premium and market availability of energy-efficient products has typically enabled purchasers to specify products that meet energy efficiency criteria and the Environmental Purchasing Policy's cost-effectiveness and practicability criteria (King County, 1999; King County, 2007; King County, 2008).

Profile: King County, Washington

Area: 2,134 square miles

Population: 1.8 million

Structure: The county, which includes 39 incorporated cities and several unincorporated areas, is governed by a publicly-elected county executive and a council consisting of publicly-elected representatives from nine districts.

Program Scope: The Environmental Purchasing Program is administered by the Business Operations Division's Procurement and Contract Services Section. In 2006, King County spent $36 million to provide approximately 17,000 employees (working in 16 primary agencies and departments) with EPPs. Of this amount, $2.4 million was spent on electronics, including desktop computers, laptops, and monitors. Most of the remaining amount was used to purchase and fuel fuel-efficient and alternative-fuel vehicles.

Program Creation Mechanisms: An Environmental Purchasing Policy was issued in 1995. This policy expanded a 1989 Recycled Product Procurement Policy. A 1999 administrative policy requires that office equipment meet ENERGY STAR qualification.

Program Savings: In 2006, purchasing EPPs, including energy-efficient products, saved King County $640,000 in procurement costs.

Source: King County, 2005; King County, 2006; King County, 2006b; King County, 2008.

Program Features

The King County Environmental Purchasing Program is administered by the Procurement and Contract Services Section of the Finance and Business Operations Division, which is responsible for communicating policy requirements and information about price, performance, and benefits of products to purchasers. Features of the program include:

- *Environmental Purchasing Program Manager.* The county hired a program manager in 1990 to oversee implementation. Serving as a program "champion," the program manager developed the framework of the program and coordinated staff training sessions.

- *Model EPP Policy.* The program includes a model EPP purchasing policy for use by its constituent cities and businesses and for other counties. The model policy highlights the importance of clearly delineating the respective implementation and operation roles of the lead agencies and the other agencies involved in the program.

- *Strategies for Maintaining Agency Support.* King County conducts educational seminars to train its purchasers to implement the Environmental Purchasing Policy. In addition, the county developed and distributes an Environmental Purchasing Bulletin to government agencies (King County, 2006b).

- *Integrated Energy and Environmental Goals.* Like many local government EPP purchasing programs, King County's Environmental Purchasing Program includes energy-efficient product procurement. King County's program is unique in that it also includes opportunities for purchasing a broad range of other EPPs, including biodiesel and hybrid vehicles. To help meet its energy and environmental goals, the program has coordinated with several other county programs, such as the Energy/Resource Conservation Program in the Department of Natural Resources and Parks, to obtain technical assistance and to disseminate information to the public (King County, 2006b).

- *Public Involvement.* King County uses its Environmentally Preferable Purchasing Program to promote the benefits of EPPs throughout the community. The program has participated in training conferences and trade shows that involve sharing experiences with state and local government personnel. The program has also conducted training sessions for local businesses and workshops at local schools (King County, 2006b).

- *Annual Reporting.* The Procurement and Contract Services Section is responsible for developing an annual report describing program accomplishments and identifying future opportunities for improvement (King County, 2007).

Program Results

In 2006, purchasing EPPs saved the county approximately $640,000 in procurement costs. Since its inception, the program has earned recognition in the form of awards from EPA and the National Association of Counties. In addition, program staff have been involved in developing a non-profit national organization called the Responsible Purchasing Network, a collaborative that seeks to promote government and business adoption of energy-efficient and EPP purchasing policies (King County, 2007).

In 2007, the county adopted an energy plan that, among other things, encourages purchasing ENERGY STAR-qualified products. The plan recommends that the county Department of Finance work with the Energy Task Force to develop a county ENERGY STAR purchasing policy for office equipment (King County, 2007b).

Web site: http://www.metrokc.gov/procure/green/

San Francisco – Green Purchasing Program

The San Francisco Green Purchasing Program assists city agencies in implementing the city's procurement policies. The program has extended its scope to include outreach to assist local businesses and residents.

Program Initiation

The Green Purchasing Program developed out of San Francisco's Environmentally Preferable Purchasing Pilot Program (EP3) and the Precautionary Purchasing Ordinance. In 1999, the city Board of Supervisors passed an ordinance that called for the creation of an Environmentally Preferable Purchasing Program (EP3) pilot. In 2003, the Board of Supervisors adopted a comprehensive Municipal Environmental Code. The second chapter of this code, the Precautionary Purchasing Ordinance (added in 2005), succeeds the ordinance that created the pilot program and is based on its findings. The ordinance requires agencies to purchase only products from the city's list of approved EPPs. Another chapter of the Environmental Code addresses resource efficiency, and requires agencies to purchase LED exit signs, electronic ballasts and T8 efficient lighting systems, photocells and timers for exterior lights. In order to meet the requirements of these ordinances, a comprehensive Green Purchasing Program was initiated (SF Environment, 2007).

Profile: San Francisco, California

Area: 47 square miles

Population: 750,000

Structure: The city is governed by a publicly-elected mayor and a Board of Supervisors comprised of representatives from 11 districts.

Program Scope: The Green Purchasing Program is administered by SF Environment, the city's environmental department. The program provides guidance on purchasing EPPs to the four divisions that purchase products for the city's 30,000 employees across approximately 90 bureaus. The city spends over $2 million on energy-using products annually (not including refrigerators or computers).

Program Creation Mechanism: A city ordinance created an Environmentally Preferable Purchasing Program pilot in 1999. The establishment of a Municipal Environmental Code in 2003, which consolidated multiple purchasing-related environmental ordinances, led to the scaling up of the pilot project into a comprehensive Green Purchasing Program.

Source: San Francisco, 2007; CEE, Undated.

Program Features

The Green Purchasing Program is administered by SF Environment, the city agency responsible for coordinating the implementation of its environmental programs. The Green Purchasing Program includes the following features:

- *Pilot program.* The EP3 pilot program enabled SF Environment to identify its best opportunities for achieving the greatest potential benefits from large-scale program implementation. The pilot program also enabled the agency to identify potential implementation challenges and develop key recommendations for addressing these concerns.

- *Compilation of information on product impacts, performance, and costs.* Through the pilot program, SF Environment collected information on the impact, performance, and cost of a range of EPPs. This information is available to agency purchasers and private residents on the SF Environment Web site.

- *Product testing.* Throughout the three-year pilot program, city staff tested the products they purchased. In 83% of these tests, the environmentally preferable product met staff performance requirements.

- *List of approved products.* Unless exempted by a waiver, purchasers are required to specify products from a predetermined list of approved products. This feature ensures consistent

program performance across the agencies and reduces the time that purchasers would otherwise expend researching product information.

- *Evaluation of listed products.* SF Environment has developed a score sheet to assist purchasers in evaluating the relative energy and environmental attributes of different products on the approved product list.

- *Stakeholder involvement.* The EP3 Pilot Program included a Working Group that consisted of city employees from ten agencies and a Technical Advisory Group, which consisted of representatives from EPA Region 9 and the states of Massachusetts and Minnesota. These groups provided input during the product list development phase and provided a link to agency purchasers.

- *Public involvement.* SF Environment encouraged community members to participate in its priority product list development process. Additionally, SF Environment developed a subsidiary Green Purchasing Program exclusively for residents. The program provides residents with guidance on selecting EPPs in their daily purchases (SF Environment, 2007).

Program Results

The July 2007 Precautionary Purchasing Ordinance progress report identifies numerous accomplishments over the past two years. The report highlights the increases in purchases of energy-efficient products, including energy-efficient T8 lamps with electronic ballasts for city facility lighting systems. The city has eliminated all purchases of T12 lamps (which are less efficient than T8s), and in FY 2005/2006, T8 lamps comprised 38% of all lamp sales (SF Environment, 2006). These replacements can lead to significant savings: replacing a single 43-watt T12 lamp with a 25-watt energy-efficient T8 lamp can produce annual energy savings of more than $4 (Focus on Energy, 2006c).

Web site: http://www.sfenvironment.org/our_programs/topics.html?ssi = 9&ti = 22#Public%20Awareness

Resources

Table 6.6.3 Energy-Efficient Product Procurement: Examples and Information Resources

Title/Description	Web Site
Examples of Local Energy-Efficient Product Procurement Activities	
Akron, New York. Akron has established an ENERGY STAR Appliance Advantage Program to provide incentives to municipal electric utility customers who purchase ENERGY STAR-qualified appliances.	http://www.erie.gov/akron/news_010107.asp
Alameda County, California. Alameda County has developed a model procurement policy and an accompanying implementation guidance document to assist local governments within its jurisdiction.	http://www.ciwmb.ca.gov/EPP/LawPolicy/AlaPolicy.doc http://www.ciwmb.ca.gov/EPP/LawPolicy/AlaPolImp.doc

Table 6.6.3 Energy-Efficient Product Procurement: Examples and Information Resources	
Title/Description	**Web Site**
Austin, Texas. Austin Energy, the city-owned and operated electric utility of Austin, Texas, offers its customers a $2 coupon for the purchase of up to two individually packaged ENERGY STAR-qualified CFLs (or $4 for the purchase of a package of two or more ENERGY STAR-qualified CFLs). The utility also offers a $10 coupon for purchases of ENERGY STAR-qualified light fixtures.	http://www.austinenergy.com/Energy%20Efficiency/Tools%20and%20Tips/Residential/Energy%20Efficient%20Appliances/products.htm
Banning, California. Banning provides rebates to municipal electric utility customers who purchase certain ENERGY STAR-qualified products.	http://www.ci.banning.ca.us/DocumentView.asp?DID = 233
Berkeley, California. Berkeley has established an EPP purchasing policy that includes language requiring city agencies to purchase energy-efficient equipment.	http://www.responsiblepurchasing.org/UserFiles/File/Ofice%20Electronics/Policies/City_of_Berkeley_CA_Green_Purchasing_Policy_2004.pdf
Chatham County, North Carolina. The County Board of Commissioners passed a resolution creating an Environmental Leadership Policy that establishes requirements for county government departments to meet EPP purchasing standards.	http://www.newdream.org/procure/policy/chatham.pdf
King County, Washington. King County has developed a comprehensive Environmental Purchasing Program. The program's Web site contains model policies and contract language to assist local governments in developing their own policies.	http://www.metrokc.gov/procure/green/policy.htm#7
Multnomah County, Oregon. Energy-efficient product procurement is a cornerstone of Multnomah County's Energy Conservation Program. This Web site provides a case study of the County's program.	http://www.naco.org/Content/ContentGroups/Programs_and_Projects/Environmental1/Energy/Energy-Efficiency.pdf
Nevada County, California. Nevada County's Green Procurement policy allows purchasers to obtain EPPs that are not "unreasonably expensive."	http://www.ciwmb.ca.gov/BuyRecycled/Policies/GPpolicy.pdf
New York City, New York. The New York City WasteLe$$ program provides assistance for municipal agencies in complying with the energy-efficient product purchasing requirements laid out in NYC Local Law 119 of 2005.	http://www.nyc.gov/html/nycwasteless/html/at_agencies/energy_efficiency.shtml
Riverside, California. The Riverside municipal electric utility offers customers rebates for purchasing ENERGY STAR-qualified energy-using products.	http://www.riversideca.gov/utilities/busi-energystar.asp
Roseau, Minnesota. Roseau offers rebates to local residents who purchase qualifying energy-efficient products.	http://city.roseau.mn.us/energyrebate.pdf
San Diego, California. San Diego has established an energy-efficient product procurement policy that requires all products purchased by government agencies to meet ENERGY STAR qualification or achieve energy efficiency performance in the top 25% of their category.	http://clerkdoc.sannet.gov/RightSite/getcontent/local.pdf?DMW_OBJECTID = 09001451800ab95b
Santa Monica, California. Santa Monica has established an environmentally preferable purchasing program that includes specifications for energy-efficient office equipment.	http://www.smgov.net/epd/printed_materials/pdf/Epp_0203_Annual%20Update.pdf

Table 6.6.3 Energy-Efficient Product Procurement: Examples and Information Resources	
Title/Description	**Web Site**
Scottsdale, Arizona. Scottsdale offers free public seminars on energy-efficient strategies, including energy-efficient product procurement.	http://www.scottsdaleaz.gov/greenbuilding/Lectures/06-07/Lecture020107.pdf
Seattle, Washington. The Seattle Sustainable Purchasing Policy was developed to consolidate the requirements of multiple city council codes and resolutions requiring local government agencies to purchase EPPs.	http://www.seattle.gov/environment/documents/sus-purchasing-policy11-06-03.doc
Washington, D.C. The Washington, D.C. city council passed legislation in 2004 requiring government agencies to specify ENERGY STAR qualification when purchasing energy-using products.	http://www.dccouncil.washington.dc.us/images/00001/20041214143141.pdf
Examples of Local Electronics Recycling Activities	
King County, Washington. King County has developed a model contract that enables county departments to obtain electronics recycling services.	http://www.metrokc.gov/procure/green/bul82.htm#4
New York City, New York. The New York City WasteLe$$ program has developed an electronics recycling initiative. City agencies, schools, businesses, and institutions are required to participate.	http://www.nyc.gov/html/nycwasteless/html/recycling/electronicsrecycling.shtml
Tacoma, Washington. Tacoma and Pierce County coordinate with local recycling companies, vendors, and consumers to make electronics recycling easier for the city and county residents.	http://www.cityoftacoma.org/Page.aspx?cid= 1366
Information Resources for Energy-Efficient Product Procurement	
Helping Agencies Buy Energy-Efficient Products. DOE has developed this paper to provide information to federal purchases on the benefits of purchasing energy-efficient products and how to obtain assistance in developing energy-efficient product procurement programs.	http://www1.eere.energy.gov/femp/pdfs/eeproducts_fs.pdf
Chapter 5: Local Action Plan Best Bets: Municipal Purchasing Programs. The Climate Protection Manual for Cities provides information on establishing local purchasing programs and developing energy efficiency standards for office equipment. This chapter includes several case studies.	http://www.climatemanual.org/Cities/downloads/CPM_Chapter5_LocalActionPlan_BestBets_Purchasing.pdf
City of Oakland Purchase/Lease: An Analysis of Procurement Options. Oakland, California commissioned this report on funding options for procurement activities. The report addresses energy efficiency, as well as lease-purchase options and bond financing.	http://www.oaklandnet.com/budgetoffice/OaklandPurchaseLease-v3.pdf
Energy-Efficient Procurement Resources. Washington State University has compiled this collection of energy-efficient procurement information resources.	http://www.energy.wsu.edu/documents/engineering/Proc_Resources.pdf
Energy-Efficient Traffic Signals. This Consortium for Energy Efficiency fact sheet provides information on the benefits of converting traffic signals to energy-efficient LEDs.	http://www.cee1.org/resrc/facts/led-fx.pdf

Table 6.6.3 Energy-Efficient Product Procurement: Examples and Information Resources	
Title/Description	**Web Site**
FEMP Purchasing Energy Efficiency Requirements. FEMP issues energy efficiency specifications for more than 50 types of products commonly purchased by federal government agencies.	http://www1.eere.energy.gov/femp/procurement/index.html
Flex Your Power Best Practices. Flex Your Power, a California PUC initiative, has developed multiple local government guidance documents on various topics. Many of these guides address issues of relevance to energy-efficient product procurement.	http://fypower.org/res/tools/res_search_results.html?skip = 220&keywords = &topic = all&res_facts = on&region = all
Guide to Energy-Efficient Heating and Cooling. This ENERGY STAR resource provides comprehensive checklists for improving HVAC system energy efficiency.	http://www.energystar.gov/ia/products/heat_cool/GUIDE_2COLOR.pdf
Institutional Purchasing: Save Money, Time and the Environment. This ENERGY STAR document provides an overview of the benefits of purchasing energy-efficiency products at the institutional level.	http://www.energystar.gov/ia/partners/reps/pt_reps_purch_procu/files/general_purchasing_new_10-4.pdf
Online Guide to Energy-Efficient Office Equipment. This ACEEE guide provides an overview of the costs and benefits of purchasing different energy-efficient office products.	http://www.aceee.org/ogeece/ch5_office.htm
Potential Energy, Cost, and CO_2 Savings from Energy-Efficient Government Purchasing. This LBNL report provides information on the benefits of energy-efficient product procurement at the government level.	http://www1.eere.energy.gov/femp/pdfs/government_purchasing.pdf
Procuring Energy-Efficient Products. This document was produced by the Consortium for Energy Efficiency as a guidebook for state and local government purchasing agencies.	http://www.cee1.org/gov/purch/gb1-rev2.pdf
State and Local Government Purchasing Initiative. Though no longer active, this Consortium for Energy Efficiency project provides information on state and local government purchasing, including guidebooks and case studies.	http://www.cee1.org/gov/purch/purch-main.php3
Strength in Numbers: An Introduction to Cooperative Procurements. This National Association of State Procurement Officials resource provides an overview of the benefits of and strategies for entering into cooperative procurement agreements.	http://www.naspo.org/cooperative/Cooperative%20Purchasing%20Introduction.pdf
Whole Building Design Guide. The Whole Building Design Guide is a comprehensive resource for designing energy-efficient facilities. The Guide includes a number of resources to assist in selecting energy-efficient building components.	http://www.wbdg.org/design/minimize_consumption.php
Information Resources for End-of-Life Management of Electronic Products	
Electronics Waste Management in the United States. This EPA report presents a national analysis of current trends in disposal and management of electronic products.	http://www.epa.gov/epaoswer/hazwaste/recycle/ecycling/manage.htm
End-of-Life Management. The Federal Electronics Challenge has developed a Web site to provide federal facilities with information on purchasing green electronics products. The Challenge maintains a collection of resources on end-of-life management.	http://www.federalelectronicschallenge.net/resources/eolmngt.htm

Table 6.6.3 Energy-Efficient Product Procurement: Examples and Information Resources	
Title/Description	**Web Site**
Guidelines for the Procurement, Use, and End-of-Life Management of Electronic Equipment. This report was developed for the California Integrated Waste Management Board to provide state agencies with tools to implement cost-saving procurement practices that have minimal energy and environmental impacts.	http://www.ciwmb.ca.gov/Electronics/Procurement/PUEOL/FinalGuide.pdf
Information Resources for Green or Environmentally-Preferable Product Procurement	
Environmentally Preferable Purchasing. This New American Dream Web site serves as a clearinghouse of resources on environmentally preferable purchasing. It includes case studies and model policies as well as guidance on developing comprehensive purchasing programs.	http://www.newdream.org/procure/
Environmentally Preferable Purchasing Database. This EPA database provides information on EPPs and services sorted by category.	http://yosemite1.epa.gov/oppt/eppstand2.nsf
Final Guidance on Environmentally Preferable Purchasing. This EPA guidance was developed in response to federal Executive Order 13101, which requires federal agencies to implement EPP purchasing policies.	http://www.epa.gov/epp/pubs/guidance/finalguidance.htm#GuidingPrinciple1
Green Procurement Initiative. The California Energy Commission has compiled a list of state, county, and local purchasing programs.	http://www.cec.org/files/PDF/ECONOMY/Green-Procurement_Initiatives_en.pdf
Green Purchasing: A Guide for Local Governments and Communities. This document, developed by the New Jersey Department of Environmental Protection, provides guidance to New Jersey communities in establishing and implementing green purchasing activities.	http://www.state.nj.us/dep/dsr/bscit/sustainable-comm/epp.pdf
A Guide to Greening Government through Powerful Purchasing Decisions. The National Association of Counties has developed a starter kit for county purchasing agents and policy makers to provide an overview of opportunities to implement EPP purchasing policies.	http://www.naco.org/Content/ContentGroups/Programs_and_Projects/Environmental1/Energy/Introduction.pdf
Hennepin County, Minnesota Lead by Example Initiative Guidelines. The Board of Commissioners in Hennepin County has authorized the creation of a Lead by Example Incentive Fund that will award a combined $100,000 to county departments that invest in EPPs. The Board has developed a set of guidelines to assist department staff in meeting the program's requirements.	http://wwwa.co.hennepin.mn.us/files/HCInternet/EPandT/Environment/Green%20Government/LBE%202007%20guidelines%20and%20instructions.pdf
Implementation Guidelines for Model Policy. These guidelines for implementing a model procurement policy were developed by Alameda County. The county's model policy has been adopted by several California local governments.	http://www.ciwmb.ca.gov/epp/LawPolicy/AlaPolImp.doc
Introduction to Cooperative Procurement. The National Association of State Procurement Officials has developed a primer on the benefits and strategies of cooperative procurement.	http://www.naspo.org/cooperative/Cooperative%20Purchasing%20Introduction.pdf

Table 6.6.3 Energy-Efficient Product Procurement: Examples and Information Resources	
Title/Description	**Web Site**
National Association of State Procurement Officials. This organization works with state procurement officials to facilitate information exchange and to aid purchasers in obtaining cost-effective products through cooperative procurement.	http://www.naspo.org/
National Institute of Governmental Purchasing. This non-profit organization provides assistance and information to public purchasers on a range of issues.	http://www.nigp.org/genlinfo/AboutUs.htm
Responsible Purchasing Network. The Responsible Purchasing Network is a project initiated by purchasing stakeholders. The Network has compiled multiple responsible purchasing guides on fleets, electronics, office equipment, and paints.	http://www.responsiblepurchasing.org/
Model Policies for Energy-Efficient and EPP Procurement	
***Environmental Purchasing Policies 101*.** The Center for a New American Dream has developed this guidance document to provide purchasers with a collection of best practices relating to environmentally preferable purchasing. This document includes a sample EPP purchasing policy.	http://www.cec.org/files/pdf//NAGPI%20Policy%20Paper2e.pdf
Model Environmentally Preferable Products Policy. The King County Environmental Purchasing Program has established this model policy for cities and other organizations.	http://www.metrokc.gov/procure/green/mdpolicy.htm
New American Dream Collection of Green Purchasing Polices. The New American Dream has collected a list of annotated examples of green purchasing policies.	http://www.newdream.org/procure/policy/index.php
Tools and Certification for Energy-Efficient and EPP Procurement	
ENERGY STAR Purchasing and Procurement. ENERGY STAR provides certification for energy-efficient products. In general, ENERGY STAR-qualified products use up to 50% less energy than conventional products of the same utility.	http://www.energystar.gov/index.cfm?c = bulk_purchasing.bus_purchasing
ENERGY STAR Purchasing and Procurement Briefings. ENERGY STAR provides monthly Webcasts that identify the resources available, including the product calculators.	http://www.energystar.gov/index.cfm?c = business.bus_internet_presentations_actionplans
EPEAT. EPEAT is a system to help purchasers compare and select computer equipment based on a product's environmental attributes. EPEAT certification is intended to meet ENERGY STAR qualification standards for energy efficiency.	http://www.epeat.net/
Green Purchasing Training. The Office of the Federal Environmental Executive provides opportunities for free online training and frequent classroom training to procurement officials interested in green purchasing.	http://ofee.gov/gp/training.asp
Green Seal. Green Seal is a non-profit organization that establishes standards for EPPs and administers its own certification program. The organization produces *Choose Green Reports* that provide information on a range of EPPs.	http://www.greenseal.org/

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