

Green Purchasing: A Guide for Local Governments and Communities



*Creating an environmentally sustainable
New Jersey anchored on an active network
of communities working for the well-being
of the local population and
ecosystems both for the
present and future generations*

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February 2006

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Green Purchasing: A Guide for Local Governments and Communities

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Acknowledgements: BSCIT/DEP thanks the following individuals for their valuable inputs, comments, and suggestions in the development of this guide:

- Kevin Lyons and Priscilla Hayes (Rutgers University),
- Cameron Lory and Amy Scott (INFORM),
- Jo-Anne Chasnow, Marc Pfeiffer (Division of Local Government Services/DCA),
- Steve Rinaldi (Bureau of Recycling and Planning/DEP), and
- Ron Prykanowski (Purchasing/Montgomery Township, NJ).

CONTENTS

Overview: Action Steps for an Effective EPP

I	Background and Purpose.....	5
II	Definition—What Green Purchasing Means	6
III	How to Establish and Implement an EPP Program	6
	<i>A. Establishing an EPP Program</i>	<i>6</i>
	<i>B. Implementing a Successful EPP Program.....</i>	<i>9</i>
IV	Assessing the Program and Measuring Results	12
V	Using Information Resources and Informing the Public.....	13

Appendixes

<i>Appendix 1</i>	<i>Asking the Right Questions: The Key to EPP</i>	<i>15</i>
<i>Appendix 2</i>	<i>The Environmentally Preferable Products Program of Massachusetts: A Case Example</i>	<i>16</i>
<i>Appendix 2a</i>	<i>Green Purchasing Policy of the U.S. Department of Defense: A Federal Agency Case Example</i>	<i>17</i>
<i>Appendix 3</i>	<i>List of Some Useful EPP Information Sources in the U.S.</i>	<i>18</i>
<i>Appendix 4</i>	<i>Some Practical Approaches and Tools for Purchasers.....</i>	<i>20</i>
<i>Appendix 5</i>	<i>Training and Consultancy Services on EPP</i>	<i>23</i>

OVERVIEW: Action Steps for an Effective Environmentally Preferable Purchasing Program (EPP)

<u>Setting Up an EPP Program</u>	<u>Implementing an EPP Program</u>
<p>1. Do an Environmental Audit or collect baseline information</p> <ul style="list-style-type: none"> ➤ Assess current procurement practices ➤ Identify in use products to eliminate or substitute 	<p>1. Create procedure to apply environmental criteria</p> <ul style="list-style-type: none"> ➤ Evaluate products and alternatives using eco-labels & guidebooks ➤ Consider reduction in primary usage at the outset
<p>2. Set policy or pass resolution on EPP</p> <ul style="list-style-type: none"> ➤ Provide direction to purchasing decisions ➤ Assume responsibility for better purchasing 	<p>2. Train staff and disseminate information</p> <ul style="list-style-type: none"> ➤ Hold regular environmental training on EPP guidelines ➤ Provide appropriate information support
<p>3. Establish up an EPP team</p> <ul style="list-style-type: none"> ➤ Assign responsibilities involving both purchasing and environmental expertise ➤ Coordinate efforts through team approach 	<p>3. Integrate environmental aspects in purchasing documents</p> <ul style="list-style-type: none"> ➤ Review legal instruments ➤ Modify bidding process/standard specifications & add lifecycle costing (if legally feasible)
<p>4. Adopt specific goals</p> <ul style="list-style-type: none"> ➤ Start with simple changes ➤ Target environmental standards without sacrificing performance and costs 	<p>4. Communicate EPP needs to suppliers/vendors</p> <ul style="list-style-type: none"> ➤ Establish clear lines of communication ➤ Ask suppliers for information and suggestions
<p>5. Gather broad support</p> <ul style="list-style-type: none"> ➤ Ensure management “buy-in” ➤ Encourage participation of and feedback from everyone concerned (at all levels) 	
<p><u>Assessing the Program & Measuring Results</u></p> <ul style="list-style-type: none"> ▪ Monitor and document product & service performance <ul style="list-style-type: none"> ▪ Evaluate and document economic impact 	

GREEN PURCHASING: A GUIDE FOR LOCAL GOVERNMENTS AND COMMUNITIES

1. Background and Purpose

With growing frequency and urgency, local governments are realizing the need to meet stricter standards of environmental stewardship. Increasing costs of waste management, worker safety and public health concerns, and the emergence of acute and chronic environmental problems both locally and globally are just a few of the issues spurring on local communities to improve the environmental characteristics of their operations. Public demand for local administrations to adopt an overall “greener” approach is also increasing rapidly. In response, a growing number of local governments are now intent on avoiding the costs of environmental degradation, and are thereby committed to instituting more sustainable practices.

The environmental impacts of local government operations directly relate to products purchased and used. The “greening” of public purchasing is therefore an immediate and practical step local government and communities can take to improve environmental performance. Green or **environmentally preferable purchasing (EPP)** not only helps improve environmental conditions, but also results in significant (but not always immediate) savings in local budget expenditures. EPP can also influence the behavior of other sectors, such as the business community, by setting an example and by sending clear signals to the market that there is a preference for green, clean and safe products. The purchasing decisions of a city, township or any other local government can have significant market influences. When municipal purchasing policies favor ecologically sensible products and services, these goods become more readily accessible to individuals and smaller businesses. It therefore makes sense, economically as well as environmentally, for local governments to establish and implement EPP programs.

Growing interest and involvement in EPP by both public and private organizations have resulted in the availability of an increasing number of environmentally preferable alternative products in the marketplace, making the important transition to sustainable purchasing easier.

The NJDEP Bureau of Sustainable Communities and Innovative Technologies (BSCIT) developed this guide to help meet the demand for basic information among New Jersey communities that are interested in developing an EPP program.

The purpose of this guide is to:

- Provide local governments with essential information on EPP; and
- Provide general guidelines on how to establish and implement an EPP program.

II. Definition---What is "Green Purchasing"

Environmentally Preferable Purchasing (EPP) is the purchase of goods and services that minimize environmental impacts. It includes the purchase of products that have "a lesser or reduced effect on human health and the environment when compared with competing products that serve the same purpose."¹ Many factors are taken into account when making these comparisons, such as:

- the raw materials, including energy and water, used in the manufacture of the product
- the type of production, (i.e., use of cleaner production processes)
- packaging or distribution method
- source reduction and reuse
- distance of transport/ localness of production

Price and performance are also important factors to consider and are critical determinants for purchasing agents. Adherence to quality and performance standards is a primary concern and need not be sacrificed. All these vital considerations could be expressed as follows:

$$\boxed{\text{Environment} + \text{Price} + \text{Performance} = \text{EPP}}$$

A proven beginning strategy in EPP consists simply of buying products with recycled content that are themselves recyclable. In the last decade, government entities and businesses throughout the country, including New Jersey, have launched strong "buy recycled" programs. There is growth potential for the purchase of recycled content products. Simply by instituting a "buy recycled" program you too can start an EPP initiative.

III. How to Establish and Implement an EPP Program

In this section, we go over some of the important elements and steps necessary to establish and operate an EPP program.

A. Establishing an EPP Program

In setting up an EPP program, there are several basic and recommended steps whose merits have been proven by a number of local governments who have incorporated "green" purchasing and have gone through the process of gaining acceptance and support for what may be considered a "new way of doing things."

1. **Perform Environmental Audit**--The **first step**, ideally, is to conduct an Environmental Audit (EA). The EA² is a review of environmental conditions and impacts of the activities of a particular enterprise or institution. In such an audit, the organization's in-house operations will be examined carefully in relation to the purchase, use and consumption of goods and services required in such operations. The results of the audit will determine the scope of the proposed program. Also,

¹ Executive Order 13101 (14 Sept. 1998): Greening the Government Through Waste Prevention, Recycling, and Federal Acquisition

² How to conduct an Environmental Audit is the subject of a separate BSCIT Environmentally Sustainable Communities technical support publication.

asking the right questions at the outset appears to be the key to an effective EPP. Please see Appendix 1 for a short discussion of this and other guiding principles for EPP.

If your local government cannot afford to conduct an EA, you can simply collect 'baseline information' to determine which products you could dispense with and where it would make sense to substitute safer ones. It is critical to have knowledge of what is currently being purchased. A survey or questionnaire to determine the baseline would be a useful way to assess present procurement practices and identify opportunities for environmental purchasing. A simple checklist for the collection of such information may be used without putting additional burden on the staff (see sample checklist in the National Association of Counties' [NACo] Environmental Purchasing Starter Kit³).

The National Association of Counties makes an important observation: "It can be challenging, at first, to consider changing the products you currently purchase. After all, many of these products have been used for years, and have been effective at getting the job done. Staff may be comfortable with the products they are using and familiar with application procedures and performance expectations." This is a key observation and it should be noted that implementing a successful EPP program will require one to ascertain the extent of changes to be made.

2. **Establish Policy Statement**⁴ --As a **second step**, policy or policy guidelines should be developed to address areas identified by the Environmental Audit or baseline survey as needing improvement. This could either be legislated or issued by directive of your local government executive depending on the existing mechanism in your local government. The NACo recommends the passing of an *environmental purchasing resolution* if your locale does not have one yet. This resolution (see a sample resolution in NACo Environmental Purchasing Starter Kit) can help build wide support for an EPP program. It is important to have a policy statement that will create the EPP and guide its implementation. Through the issuance of such a policy or resolution, your local government acknowledges its responsibility as a major purchaser of goods and services. The policies and guidelines you adopt may have the following objectives:

- improve the community's environmental performance and make it more sustainable
- raise awareness of environmental issues among the staff
- establish the organization's clear commitment to conducting its functions in an environmentally responsible manner
- provide a point of reference for actual and potential suppliers.

The improvement of environmental performance of a government, at any level, is often considered a component of good management. However, this objective is a moving target that cannot be achieved instantaneously and should be continuously improved. Also, EPP programs cannot merely be reduced to a budget savings

³ A copy can be obtained from NACo. Visit the NACo EPP Web site listed in Appendix 3 of this guide. You can also write or fax the NACo Environmental Purchasing Project, 440 First Street, NW, Washington, DC 20001—Fax (202)-737-0480.

⁴ In certain situations, this step may be skipped. It is not absolutely necessary to have a policy at the outset for an EPP program to be started.

exercise although saving money is critical for many local governments. Achievement in green purchasing programs can provide the opportunity to change the attitudes and beliefs of people within an organization. Individuals should feel that increasing a community's environmental performance is a meaningful, long-term objective that has value both for the community and the employees.

3. **Establish EPP Team**--The **third step**, after an EPP policy has been adopted, is to establish an EPP Team or coordinating group. In any organization, a number of people are involved in purchasing; this function is not the responsibility of any single individual. Some people request products or services while others procure goods and award contracts. Case studies have shown that an effective way of incorporating environmental aspects into the purchasing process is to form a team of individuals with purchasing and environmental expertise. In a small community, a team may be comprised of only two or three people. In large government establishments, the best option might be to assemble a group of people from various units. A team with diverse composition and institutional perspectives makes it likely that all opportunities to incorporate environmental criteria in purchasing decisions will be pursued. This team approach is an effective means of gaining support. Part of the team's responsibility will be to ensure the goals of the EPP policy are synchronized with the legal requirements of the NJ Local Public Contracts Law.

4. **Develop EPP Goals**--The **fourth step** is to establish specific goals for the EPP program. The aim of EPP is to change the procurement patterns of a town or city administration in order to follow the principles of sustainability. A key lesson from successful EPP programs is to start with changes that are simple, easy to implement, and save dollars immediately. Upon inception, a program may focus on a single environmental attribute (e.g., recycled content) and then gradually expand its goals to encompass multiple environmental attributes. As an example, The U.S. Environmental Protection Agency (USEPA) has cited Massachusetts, whose EPP initially focused on purchasing recycled-content paper and envelopes. As it gained experience in this area, Massachusetts expanded the program to include additional environmental attributes such as low-toxicity cleaning products, bio-based lubricants, and energy-efficient lamps and office equipment.

The goals set should be based on the environmental attributes that an organization can effectively address without unduly affecting the performance and cost of products and services. While not all attributes will be relevant to every local government or community, the following are some that may be worth considering:

- Reduced hazardous chemicals and minimized human health risks
(Less toxic-materials content, chemical releases, bio-accumulative pollutants)
- Efficient resource use
(renewable resources, water efficient)
- Waste reduction
(recycled content, solid waste minimization)
- Energy efficiency

In setting program goals, it will be necessary to consider the results of the Environmental Audit (which covers review of current purchasing practices, including the procurement of services, invoices, and resource-consumption records, such as,

water and electric bills). Reviewing the audit results will help identify areas and materials where policies will be most effective.

5. **Obtain Wide Support**--The **fifth and final step** is to secure support for EPP from all levels of the organization. Top management support is indicated by the adoption of an EPP policy (in the second step). This support is critical to making environmental purchasing a priority and facilitating the implementation of the program. Since purchasing is operated by officials within local government, management has the capacity to provide a supportive environment for the transition to and evolution of green purchasing.

When promoting EPP, emphasis should be given to the advantages of the program, including cost savings, health and safety benefits, and regulatory compliance. The entire local government needs to be briefed about the program, and employees should be informed that the program will be continually evolving. Employee participation and feedback, including suggestions for improvement, are critical to the program's success and so communication must be encouraged. There are several ways of increasing employee participation, including the use of incentives (e.g., staff bonuses), sponsorship of competitions between departments, and inclusion of environmental performance as part of the annual staff reviews.

It is natural for a program of this kind to be welcomed with more enthusiasm by some parts of a local government than by others so progress is not expected to be consistent throughout the organization. It is therefore necessary to create and maintain good internal communications so units that are ahead can share their experience and motivate others to follow. Sharing of information and updates on the program can be done through newsletters, staff meetings, or e-mail announcements. Employees must be kept in the EPP loop through timely information dissemination.

6. **Summary**

In summary, the previous steps indicate that the following elements are essential for a successful environmental purchasing program:

- A review of the environmental impact of the activities of a community/local government (environmental audit or simple equivalent¹)
- A community/agency-wide EPP policy
- An EPP Team to guide and promote the program
- Specific, measurable goals by which progress can be tracked
- Support and involvement from all levels within the local government
- Monitoring/feedback process.

B. **Implementing a Successful EPP Program**

The implementation of a successful EPP program requires a comprehensive approach to procurement that involves critical activities such as: a) the examination of an array of product attributes and not just the usual cost and performance factors, b) training of purchasers and users, c) the incorporation of environmental attributes in purchasing procedures and documents, and d) communicating EPP requirements to vendors/suppliers.

1. Application of environmental criteria on purchasing

A procedure for environmental assessments in procurement and identifying specific environmental criteria for products should be developed and applied systematically in the purchasing process of towns/cities. If an assessment of all purchasing is not feasible, the local governments should set priorities among their purchasing decisions so the EPP program has a focus. As a start, a town/city could require all suppliers (in the selected priority product areas) who submit bids to provide an environmental declaration and make the purchasing decision subject to an environmental assessment. Based on the assessment, local authorities should be able to choose products that are best both for the working environment and the community environment as a whole. Practical instruments to help evaluate products and ascertain if they meet these criteria include (a) **eco-labels** and (b) **guidebooks**. Eco-labeling is the selection of greener products on the basis of multiple environmental criteria; they are distinguished from similar products by a logo. Public purchasers may also access all the necessary information through detailed guidebooks. These provide specific guidance on products as well as indications of methods used in their production. Appendix 4 provides more information on these two tools.

Examples of guidelines that could be applied as general recommendations are as follows:

- Select products that damage the environment as little as possible, both when they are manufactured and when they are used. The entire process from production to consumption to final destruction or disposal must be taken into consideration.
- Select products that are not harmful to consumers or users (also consider the working environment of the employees).
- Select products that are biologically degradable or that can be reused.
- Select products that do not unnecessarily consume energy and natural resources either when they are manufactured or when they are used.

In addition, bans on specific products that are toxic could be imposed either absolutely or if other alternatives exist.

It is important to assess the need for a particular product so as to minimize the number of products purchased and, consequently, reduce waste generated. Purchasers are encouraged to look first into achieving reductions in primary usage prior to introducing environmentally preferable or recycled products.

Many of the products and services commonly used by local governments now have more environmentally preferable alternatives. These include cleaning products, building materials, office supplies and electronic equipment. More information on the environmental attributes of these and other related products can be obtained from a variety of sources. However, identifying environmentally preferable products is a complex procedure. It involves bringing together verifiable information about the effects products and services may have on the environment while possibly considering their entire life cycle. In order to overcome this limitation, staff involved will have to be trained.

2. Training and information dissemination

Implementation of an EPP program depends to a large degree on the actions of individual departments/units of your local government. Environmental training courses for staff should be held regularly to discuss or review the EPP policy guidelines (see Appendix 5 for more information about training options) and orientation for new staff must include reference to these guidelines (probably as part of the environmental issues section of the orientation). Dissemination of information and training should be done step-by-step. If a continuous staff-development and training program already exists, a component on environmentally friendly purchasing should be incorporated into that program.

The available information and claims made by suppliers on the environmental friendliness of their products can be overwhelming and confusing. Accurate and concise information will be needed to help staff making purchasing decisions. The appropriate support information must be accessible to purchasers.⁵

3. Incorporating environmental attributes into purchasing documents

The legal framework and documents for purchasing may need to be reviewed to make environmentally friendly products and services competitive with traditional ones. There are three important items to consider in this regard:

- Bidding process- A competitive bidding process provides an opportunity to specify the desired environmental attributes in products or services to be purchased.
- Standard specifications- Specifications meant to be used repeatedly need to be reviewed to check if there are requirements that would constrain environmentally preferable purchasing options. As appropriate, the standard specifications should be modified to incorporate environmentally preferable product attributes. Categories for these products could be established within a bid request. This will facilitate identification and comparison of bids that now include the desired product attributes.
- Lifecycle costs- The total cost of ownership (including operation and maintenance), instead of simply considering the initial cost of the product, should be considered as basis of contract award. Lifecycle costing will make environmentally preferable products competitive with traditional ones as the former usually embodies attributes such as greater durability. Green purchasing for some products may be more expensive initially, but based on lifecycle costing may prove to be more economical in the long run. It is critical to ensure that the bid specifications are carefully crafted to ensure that the goal of lifecycle costing is integrated into the bid evaluation process. This may be a complicated process and the local government will need help in this area.

4. Communicating EPP requirements to vendors/suppliers

It is necessary to communicate with vendors/suppliers to (a) orient them on your EPP policy and guidelines and (b) obtain relevant information. This communication will help establish a working partnership with the suppliers in regard to achieving EPP goals or at least make them aware of the local government's interest in environmentally preferable products.

⁵ The purchasing manager can obtain information/insight (that enables distinguishing claims) through a variety of approaches that have been developed to meet this challenge. See Appendix 4 for a brief discussion of these approaches and practical instruments.

Clear lines of communication about your local government's purchasing goals could be established by (a) reviewing vendors' environmental performance, (b) sharing your community's environmental philosophy with vendors, and (c) requesting products that contain attributes set forth in the EPP policy adopted. This could be done before issuance of a bid request so as to prompt the potential suppliers to think about offering products with the desired environmental attributes.

Suppliers could also be asked to offer suggestions on environmentally preferable products for consideration in future bids. Some flexibility could also be provided in bid requests, which would enable vendors to add EPP alternatives after the award of the contract (subject to approval by the purchaser).

A growing number of vendors already market environmentally preferable alternatives. This field is growing fast and it will be useful to talk to new vendors and product manufacturers who can offer "green" products that are unknown to existing vendors. Vendors' fairs⁶ and meetings provide information on new products and offer an ideal way for local government representatives to meet with product manufacturers and vendors. Such venues provide a forum to discuss performance and environmental criteria. Information from vendors gathered through this process can also be useful in specification writing, but not used to limit competition by specifying a specific vendor's product.

If done correctly, this interaction will draw ideas on EPP opportunities from suppliers without having to conduct in-house research.⁷ Some difficulties may be encountered, as suppliers may be reluctant to share complete content descriptions of their products and to be open about their methods of production. Others, attracted by the prospect of gaining additional business, might be more amenable to environmentally adapting their activities and products.

Appendix 2 presents a case example of an EPP program in the United States that has been successfully established and implemented.

IV. Assessing the Program and Measuring Results

It is important for the EPP program to be monitored and progress to be measured because it involves a new way of doing things. Assessing the program will provide documented data to management and staff pertaining to program benefits. It will also allow the program goals/targets to be adjusted and/or strengthened. There are two key activities in measuring results:

A. Monitoring and documentation of product and service performance

The local government must keep track⁸ of the products and services it purchases through the EPP program to make sure that they are performing up to standards. A simple way to monitor the performance of products and services is to conduct a survey of end users at the end of a given time period (e.g., once a year).

⁶ Organized by the local government or jointly by the local government and local chamber of commerce.

⁷ The local government can also conduct upfront research on environmental purchasing options if it has the means to do so. There are quite a number of purchasing and pollution prevention resources that can assist in this effort. In addition to product manufacturers, these include other local governments, state government, the federal government (particularly USEPA), private consultants, universities, and nonprofit organizations.

⁸ Probably, the local government should be doing this with all products.

B. Evaluation and documentation of economic impact

Environmentally preferable purchasing, particularly if it involves waste reduction, should result in significant cost savings. These savings could be demonstrated by looking beyond the initial cost of a product or service and analyzing the savings gained from the attributes associated with green products, such as avoided disposal costs, water and energy conservation measures, reduced material handling, and pollution abatement. Money could be saved at the point of purchase and there may also be indirect savings because of the reduction in waste management costs or elimination of storage requirements. Documented cost savings will reinforce the local government's commitment to EPP.

In addition to economic impact (e.g., cost savings), other measures of performance that would be relevant are:

- Improved worker health and safety
- Product attributes
- Resource conservation
- Reduced consumption of chemicals

V. Using Information Resources and Informing the Public

A wide variety of information sources and resources on EPP are available to support local government efforts and most are accessible from the Internet. Appendix 3 provides a list of some useful Web resources in the United States.

There are a number of federal government programs that support EPP which have generated a substantial body of information that is accessible electronically. For example, there has been a legislative mandate (under the U.S. Resource Conservation and Recovery Act of 1976) to "buy recycled" for a number of products (www.epa.gov/cpg/). Many of the more established and successful programs have targeted a single attribute, e.g., recycled content or energy efficiency (www.eren.doe.gov/femp/). However, since 1993, a USEPA program, the result of a Presidential Executive Order, has provided guidance to federal agencies about ways to adopt a more comprehensive approach to "green procurement" (www.epa.gov/opptintr/epp/). The USEPA developed an environmental database that includes product specific information identified by domestic and international government programs and non-government organizations. Users can browse for criteria, standards, specifications, and contract language that can be applied to specific product categories. Another program developed by the multi-agency Joint Group on Environmental Attributes updates the Federal Logistics Information System to facilitate the identification of environmental aspects of products. The products belong to a computerized database of more than 7 million supply items. At the local level, the National Association of Counties has developed an "Environmental Purchasing Starter Kit" to assist stakeholders, such as, purchasing agents, county and city managers, environmental services staff, department managers, recycling coordinators, local elected officials, product users, and local government vendors (www.naco.org/programs/envIRON/purchase.cfm/). The kit can be downloaded from the NACo Web site.

Once your EPP program proves successful, it will be good to inform your constituencies, the public and other interested parties of your accomplishments. Your local government will gain from such positive public relations. The local media should be kept informed to ensure dissemination and sharing of your EPP experience throughout your jurisdiction and beyond. Please refer to the sample press release included in the NACo Environmental Purchasing Starter Kit.

* Questions, comments and suggestions on this guide are welcome. This guide will be updated as new information become available.

Rutgers University is preparing to open a laboratory dedicated to EPP. The laboratory will perform "on-demand" research on EPP products and services. It will also conduct training and workshops. Dr. Kevin Lyons will head the laboratory (see Appendix 5 for contact information).

Appendix 1 Asking the Right Questions: Key to EPP

The adoption and implementation of an Environmental Management System (EMS)⁹ has helped government agencies formulate **fundamental questions** that need to be answered before engaging the purchasing/procurement process. The following are the sort of questions that should be asked, whether an EMS is in place or not, before any purchasing decision is ever made:

- What function is required, and for which purposes?
- How will this function vary over time?
- Does the envisaged product/service provide the desired function?
- What are the alternative paths to satisfy the desired function?

Answering these questions in a thorough way may be extremely time consuming. Very often a need is not clearly defined, hence it may be described in such a way that many of the characteristics are not pinpointed. In most cases this hurdle is overcome through the appropriate training of purchasing officers.

It may also be useful to note that the USEPA has identified guiding principles for federal agencies to follow when purchasing goods and services. These principles should be helpful to local government entities.

1. Pollution prevention. Consideration of environmental preferability should be highlighted early on in the procurement process and must be based on a pollution prevention approach that seeks to eliminate or reduce, up front, potential risks to human health and the environment.
2. Multiple attributes. The environmental preferability of a product or service is a function of multiple environmental attributes.
3. LifeCycle Perspective. To the extent feasible, environmental preferability should reflect life-cycle consideration of products and services.
4. Magnitude of Impact. Environmental preferability should consider the scale (global versus local) and temporal aspects (reversibility) of the impacts.
5. Local conditions. Environmental preferability should be tailored to the local situation where appropriate.
6. Product-attribute claims. Agencies need to examine product attribute claims carefully.
7. Competition. Where appropriate, environmental attributes of products or services should be an important factor or subfactor in competition among vendors.

⁹ A separate BSCIT technical support publication deals with Environmental Auditing, the process that usually leads to adoption of an Environmental Management Strategy (EMS). In most cases, improvement of environmental performance (at a practical level) by governments, including local governments, is pursued through two complementary activities: (a) promotion of environmental management (EM), and (b) implementation of EPP. Ideally, the two aspects should go hand in hand. On the one hand, EM can contribute to the overall performance of an organization by establishing regular monitoring and evaluation of, among other things, its own use of purchased goods and services. On the other hand, EPP is most effective if it stems from and translates into action-- the operational choices made by an organization that is targeted toward a more comprehensive management of its environmental systems.

Appendix 2 The Environmentally Preferable Products Program (EPP) of Massachusetts: A State Case Example

For the last few years, the Central Purchasing Office for the Commonwealth (State) of Massachusetts has worked to develop and implement an Environmentally Preferable Products (EPP) program. The program forms part of the state's procurement policy, which is aimed at providing **best value** by developing criteria that measure factors beyond cost. It involves research on environmentally preferable products as well as periodic establishment of EPP purchasing goals. The program has been designed to assist the state's departments in their efforts to:

- Minimize the environmental impacts due to manufacturing, utilization or disposal of products purchased by the state or its contractors
- Encourage private-sector development of more environmentally benign products and services by increasing demand for these products and services
- Provide a model for other public, private and non-profit organizations to make environmental criteria a component of purchasing decisions, by testing, using and promoting the use of environmentally preferable products.

The program operates through statewide contracts procured by the central agency that offer environmentally preferable goods and services ranging from office paper products, janitorial supplies and recycling bins, paints, motor oil, traffic cones, toner cartridges and office panels. Most are available at a value and quality comparable to nonenvironmentally preferable counterparts. A procuring department is able to choose an item or service identified under the statewide contract without having to conduct a separate competitive procurement. Statewide contracts are currently being developed with a view to creating a "basket" of items, so that the departments may quickly shop for what they may need. Like in New Jersey, Massachusetts local governments can purchase off state contracts without bidding themselves.

Some of the methods for promoting use of EPP products and services under the Program include the following:

- When a department seeks goods or services not designated as environmentally preferable, but has researched and identified an EPP meeting their needs and providing best value, they may specify EPP requirements in their bid documentation; alternatively, a procuring department may award additional points to suppliers offering EPPs, thereby giving them an advantage toward winning the contract.
- Requests for Proposals (RFPs) may indicate that an EPP product will be considered best value even when the price is greater than that of a non-EPP product (recommended not to exceed 10 percent).
- Points may be awarded to bidders who use environmentally preferable products, services, or engage in environmentally preferable practices as part of conducting their business.
- RFPs may request bidders to submit information whenever possible to identify any and all environmental attributes of the product or service being procured, even when such attributes are not being required. Such information can be useful in preparing future calls for bids and determining appropriate specifications for EPP.

A critical factor in the success of the program hinged on environmental specialists working side by side with procurement colleagues in the central procurement agency's activities.

Note: Further information on local EPP initiatives can be obtained from the USEPA publication **State and Local Government Pioneers: How State and Local Governments Are Implementing Environmentally Preferable Purchasing Practices** (EPA 742-R-00/004, November 2000). This report illustrates how more than 40 state and local governments are currently implementing EPP. The document is posted in the USEPA EPP Web site www.epa.gov/epp under the heading "case studies".

Appendix 2a Green Purchasing Policy of the U.S. Department of Defense (DOD): A Federal Agency Case Example¹⁰

After more than three years of work, the U.S. Department of Defense will be finalizing a green purchasing policy. Although the DoD began working on a green purchasing program several years ago, in 2001 it formed a green procurement work group to study the issue and offer suggestions for implementation. Department officials have stated that “practicing good environmental stewardship and protecting natural resources is essential to ensuring that the defense department succeeds in its mission of protecting the country.”

The DoD's green purchasing plan states that the department's goal is to achieve 100 percent compliance with existing federal laws and presidential orders that require green purchases. The plan will stipulate that employees making purchasing decisions will be held accountable for compliance.

To assist the DoD employees, two Web tools have been established to (a) help identify green purchasing requirements, and (b) assist in measuring compliance. The USEPA developed a site at the request of the DOD that identifies categories of products for which there are green purchasing requirements. It also identifies specific products meeting those requirements as well as suppliers selling the products. The site is accessible at www.epa.gov/epp/database.htm.

The Defense Logistics Agency developed the second tool, which is accessible through the Internet, that tracks how many green products an installation purchases through the agency. However, the site cannot help installations track purchases from sources other than the Defense Logistics Agency.

The DOD hopes eventually to develop a system that could track purchases made with government-issued credit cards to determine how many of them qualify as green products. However, the technology does not yet exist.

Note: More case studies of EPP programs in federal agencies are found in the USEPA publication: **Federal Pioneers: Environmentally Preferable Purchasing Stories from the Federal Government** (EPA 742-F-00-008, September 2000). The document covers short case study descriptions of 27 successful applications of EPP. Each short description includes a link to a more detailed description on the Internet. The publication can be found in the USEPA EPP Web site www.epa.gov/epp under the heading “case studies.”

¹⁰ Information for this case example provided by Dr. Kevin Lyons, interim director, Purchasing Department, Rutgers, The State University of New Jersey.

Appendix 3 List of Some Useful EPP Information Sources

Buy Green—A Guide to Green Products and Services

www.buygreen.cm/

A good source of information about guidelines, standards and certification services. Links are provided to all major services and their associated green products.

Government Purchasing Project

www.essential.org/orgs/GPP/GPP.htm

The homepage of a U.S. public interest group. They work to urge the government to use its immense purchasing power to promote safe, cost-effective, energy-efficient and environmentally sound products.

The U.S. General Services Administration (GSA)— Procurement Page

www.gsa.gov/pubs/dbgsa/dbgsa.htm

This site describes how to do business with the GSA.

The U.S. Environmental Protection Agency (USEPA) Comprehensive Procurement Guidelines (CPG)

www.epa.gov/cpg/

This site offers all you want to learn about the CPG and about USEPA's Recovered Materials Advisory Notices (RMANS), which recommend recycled-content levels for CPG items.

EPPNET: Environmentally Preferable Products Procurement Listserv.

Northeast Recycling Council (NERC)

www.nerc.org/eppnet.html

Makes available information such as product specifications, vendors' lists, pricing information, and federal procurement policies.

The USEPA Environmentally Preferred Purchasing Program Database

www.epa.gov/epp/database.htm

A comprehensive source of information on green purchasing. Database includes green contract language and specifications, voluntary standards and guidelines, and other practical information.

U.S. Green Purchasing Information Site

www.pprc.org/pprc/pubs/topics/envpurch.html

Contains information compiled by the Pacific Northwest Pollution Prevention Resource Center (PPRC) to assist purchasers in their efforts to maintain an EPP program.

Massachusetts EPP Program

www.state.ma.us/osd/enviro/enviro.htm

Contains information about state efforts to buy green products, including useful guides and reports as well as contracts for purchasing recycled products and other goods.

North American Commission for Environmental Cooperation, Trade in Environmentally Preferable Goods and Services Project

www.cec.org/programs_projects/trade_environ_econ

Project aims to build North American markets for renewable energy and other green products and to facilitate green trade through eco-labeling and green purchasing.

Recycled Products Purchasing Cooperative

www.recycledproducts.org/index.html

A cooperative of U.S. businesses and public institutions that have joined their purchasing power to encourage suppliers to offer recycled paper and other products at reduced rates.

Energy Star

www.energystar.gov

A USEPA-sponsored program that sets energy-efficiency standards for computers, monitors, printers, and other appliances and certifies green buildings (in terms of energy parameters).

The National Association of Counties' (NACo) Environmental Purchasing Starter Kit

www.naco.org/program/envIRON/purchase.cfm

Contains resources to facilitate the implementation of EPP practices. The kit contains an overview of green procurement, case studies, a comprehensive list of resources, a sample environmental purchasing resolution, a baseline survey and a model press release.

International Council for Local Environmental Initiatives (ICLEI) – EcoProcura Link Database

www.iclei.org/europe/economy/links.htm

A good resource for locating EPP-related sites outside of North America.

Green Seal

www.greenseal.org

An independent organization that certifies and promotes green products and services and works with manufacturers, industry, purchasing groups and governments to green the production and purchasing chain.

New Jersey Department of Environmental Protection (NJDEP) Buy Recycled

www.recyclenj.org

The NJDEP Bureau of Recycling and Planning information site. It provides information on recycled-material-content products (apparel, plastic-lumber products, paper and paper products, interior design and furnishings, building products and miscellaneous items).

New Jersey Department of Treasury Distribution and Support Services (DSS)

www.state.nj.us/treasury/dss

The Department of Treasury is the State's central procurement agency. It operates a distribution and support services unit or distribution center that provides state agencies, counties, municipalities, and school boards with goods at significantly reduced prices through bulk purchasing. It can also purchase, using state contracts, on behalf of these entities. While not specifically concerned with EPP, information on DSS may be useful as municipalities can purchase goods through the distribution center.

Appendix 4 Some Practical Approaches and Tools for Purchasers

Identifying environmentally preferred products is not an easy task. It involves bringing together verifiable information about the effects products and services may have on the environment. It also entails assessing claims on the environmental attributes of products. A number of approaches have been developed to address this critical challenge. Some of the approaches/tools are discussed below.

Eco-labeling

Eco-labeling is the selection of green products on the basis of multiple environmental criteria; they are distinguished from similar products by a *logo*. They provide the marketplace with a clear signal about the very complex effects products may have on the environment. Several countries are running multiple-criteria environmental certification systems. Most of the systems enjoy government support, but in the United States there are no government-run or government-sanctioned eco-labeling programs. Currently, there are at least two privately-run programs in the country. These are *Green Seal* and *Scientific Certification Systems*. The former includes 88 product categories and 300 labeled products. For more information, visit www.greenseal.org. The latter promotes the manufacture and sale of environmentally responsible consumer products through product evaluation, labeling, and directories of green products. Visit www.scs1.com for details. Local and state programs are relying on eco-labeling in their green purchasing efforts.

Note: Further information on the eco-labeling topic can be found in the USEPA report **Environmental Labeling Issues, Policies, and Practices Worldwide** (EPA 742-R-98-009, December 1998). The purpose of the report is to provide an overview and analysis of environmental-labeling programs worldwide. The report can be viewed/downloaded from the USEPA EPP Web site www.epa.gov/epp under the heading "environmental labeling."

Below are some related environmental-labeling links:

Consumer Labeling Initiative - www.epa.gov/labeling/

A diverse group of federal and private groups have been working together voluntarily to learn how to make important health, safe-use, and environmental information on household product labels easier to find, read, understand, and use.

Federal Trade Commission Green Guides - www.ftc.gov/bcp/grnrule/guides980427.htm, www.epa.gov/epahome/exitepa.htm

Guides to environmental claims including labeling, advertising, and promotional materials.

ISO - International Labeling Standards - www.iso.org/iso/en/ISOOnline.frontpage

The official ISO site that houses detailed information on ISO, ISO 9000 and 14000, ISO products and services, standards development and press releases.

Guidebooks

Public purchasers may access necessary information through detailed guidebooks. While guidebooks greatly differ from one another because of origin and subject matter, they have a common feature. They address the needs, issues and questions of purchasing officials or the purchasing function. They often provide specific guidance on products such as building and packaging materials. They also provide indications of method. This means that they describe how green purchasing can be implemented by listing available options while describing the circumstances in which these options may be attractive. Guidebooks offer the advantage of being comprehensive because they explain the factors that need to be taken into account to improve environmental performance and purchasing practices, and usually list practical tips purchasers can follow and include in their Requests for Proposals (RFPs). In 1992, the U.S. Federal Trade Commission published Green Guides that meant to help check suppliers' environmental claims. Also in 1992, a green consumer organization developed a guidebook entitled "Forty Ways to Make Government Purchasing Green." Several guidebooks have been developed for the construction sector, including the Leadership in Energy and Environmental Design Rating System (LEED) created by the U.S. Green Building Council, a consortium of private and public organizations (www.usgbc.org/programs/leed.htm).

Examples of published guides in other important product areas are listed below:

Environmental Products Guide. U.S. General Services Administration, Federal Supply Service. 1998 . Comprehensive guide to environmentally preferred products. Visit: www.pub.fss.gsa.gov/environ/index.html.

SAGE: Solvent Alternatives Guide. U.S. EPA and Research Triangle Institute. Provides pollution prevention information on solvent and process alternatives for parts cleaning and degreasing. Visit www.clean.rti.org/.

The Official RPG Green Products Directory. Recycled Products Guide (RPG). 1997. Provides current and comprehensive information on recycled products. Visit www.recyclingdata.com/director.htm.

Energy Efficiency and Renewable Energy Clearinghouse. U.S. Department of Energy. Resource for energy efficiency and renewable energy information. Visit www.eren.doe.gov.

The Harris Directory. A database of recycled and other environmentally preferable building materials. Visit www.harrisdirectory.com/index.html.

CPC: The Chlorine-Free Products Cooperative. Chlorine-Free Paper Consortium. Lists chlorine-free paper products and manufacturers. Visit <http://clfree.org>.

Life Cycle Assessment and Life Cycle Cost Analysis

“Life Cycle Assessment” (LCA) details the efforts conducted by the scientific community, with the support of public authorities and the private sector, to develop a tool for the objective assessment of the environmental effects of products and processes over the entire lifetime of products. The assessment includes the entire lifecycle of the product, process or activity, encompassing extracting and processing raw materials; manufacturing, transportation and distribution; use, re-use, maintenance; recycling, and final disposal.

Governments are actively supporting developments in the science of LCA. The International Standardization Organization (ISO) has published LCA standards. However, as the methodology currently stands, it appears unrealistic and probably undesirable to expect that LCA can serve as the sole basis for determining what products are best for the environment. At most, the science may be used to support or clarify issues that must finally be decided upon through other mechanisms, such as covenants or voluntary agreements, based on a lifecycle management approach and eco-labeling system (as discussed above).

A related concept is “Life Cycle Cost” (LCC), which is the overall estimated cost for a particular product/process alternative over the time period corresponding to the life of the product/process, including direct and indirect initial costs plus any periodic or continuing costs for operation and maintenance. The use of LCC is recommended, to the extent feasible, in green purchasing programs. Briefly, the steps in an LCC analysis are:

a) identification of feasible project or product alternatives, b) establishment of common assumptions, c) conversion of all dollar amounts to present value, c) computation and comparison of LCCs of the different alternatives, and d) interpretation of results.

Below are a few references dealing with LCC:

Energy Life-Cycle Cost Analysis. Washington State Department of General Administration. Provides guidance for performing energy lifecycle cost analysis and promoting the selection of low lifecycle cost alternatives. Available at www.ga.wa.gov/EAS/elcca.

Life-Cycle Cost Analysis Guidelines. Iowa Department of Natural Resources. The guidelines are meant to assist architects and engineers in completing lifecycle cost analysis reports required by state code for publicly owned facilities. Available at www.state.ia.us/dnr/energy/MAIN/PROGRAM/BEM/.

Life-Cycle Cost Analysis Handbook (First Edition). State of Alaska Department of Education and Early Development. Guidelines for school districts and communities in evaluating lifecycle cost of school construction decisions. Available at www.eed.state.ak.us/facilities/publication.html.

Appendix 5 Training and Consultancy Services on EPP

Since EPP is likely to be new to some municipalities, it will be useful for those interested to plan on attending seminars/workshops on the subject. As BSCIT obtains information on forthcoming workshops, it will be disseminated via the DEP Web site or through our partner organizations.

Your local government may only have a few staffmembers, staff that are already stretched to the maximum and may find it difficult to undertake new task, or a staff that would want to be guided step by step (and would be willing to pay the necessary cost) to establish and implement an EPP program. In these cases, it will be appropriate for the local government to avail itself of consultancy services. Green purchasing consultancy and training services are available from both public- and private- sector sources. Following is a non-exclusive list of sources of green purchasing expert resources posted in the Office of the Federal Environmental Executive (OFEE) Web site (www.ofee.gov/gp/training.html). Contact these sources to discuss possible training arrangements. In addition, several federal agencies like USEPA offer e-training.

- Kevin Lyons, interim director, University Procurement & Contracting, Rutgers, The State University of New Jersey, klyons@camden.rutgers.edu - environmentally preferable purchasing, affirmative procurement programs, integrating EPP into eProcurement Systems, and Life Cycle Assessment/Costing Training
- Dana Arnold, White House Task Force on Waste Prevention and Recycling, arnold.dana@ofee.gov - buying recycled-content products, environmentally preferable purchasing, biobased products, affirmative procurement programs
- Pat Rippey and Beth Martin, U.S. Army Center for Health Promotion and Preventive Medicine, pat.rippy@apg.amedd.army.mil or beth.martin@apg.amedd.army.mil - buying recycled-content products, environmentally preferable purchasing, biobased products, affirmative procurement programs
- Richard Langston, U.S. DOE, richard.langston@hq.doe.gov - environmental procurement policy
- Alison Thomas, U.S. DOE, Federal Energy Management Program, alison.thomas@ee.doe.gov - energy-efficient products
- Shabnam Fardanesh, U.S. DOE, Federal Fleet AFV Program, shabnam.fardanesh@ee.doe.gov - alternative-fuel vehicles, alternative fuels, energy efficiency, FAST Federal fleet data collection system
- Linda Mesaros, Mesaros Consulting, linmesaros@aol.com - legal and Federal Acquisition Regulation (FAR) requirements, buying recycled-content and environmentally preferable products, and affirmative procurement with an emphasis on biobased products
- Richard Keller, Maryland Environmental Service, rkell@menv.com - buying recycled-content products, recycling contracts, affirmative procurement, environmentally preferable purchasing, waste prevention and recycling
- Scot Case, Center for a New American Dream, scot@newdream.org - environmentally preferable purchasing, affirmative procurement programs, lifecycle analysis
- Sandra Cannon, Battelle (U.S. Department of Energy, Pacific Northwest National Laboratory), sandra.cannon@pnl.gov, environmentally preferable purchasing/lifecycle purchasing