

# Green Purchasing

## Opportunities and Best Practices



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Research and Writing by:



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# GREEN PURCHASING OPPORTUNITIES AND BEST PRACTICES

## Purpose of This Guide

Amid growing interest by states to “lead by example,” there is an increasing need for tools to help guide states — including staff people who are writing specifications, developing bid solicitation documents, evaluating offers, and ultimately promoting and monitoring the usage of state contracts — to more easily identify and maximize green purchasing opportunities.

This opportunity assessment is designed to provide general guidance to help states practice green purchasing, no matter the product category. It walks users through actions states can take during each step of the procurement process, identifying questions they can ask, contracting strategies they can deploy, and tools and other resources they can utilize to make their job easier. In particular, it answers questions such as:

How can I [identify and prioritize](#) green purchasing opportunities?

How can I understand the [markets for green products](#) and determine appropriate [green specifications](#) to use?

How can I choose the [purchasing method](#) that is most likely to result in competitive bids for green products and services? Are there [shortcuts](#)? And how can I best design the bid documents to support that?

When the bids are returned, how can I [evaluate the green attributes](#) of products and services offered by bidders to ensure they meet the environmental criteria established in the bid specifications and achieve best value?

In what ways can the State [promote the availability of green products and services](#) that have been added to its contracts in order to increase the likelihood that they will ultimately be purchased by State agencies and other contract users?

How can I effectively [track and report](#) “green” product spending on State contracts?

The following sections (and associated appendices) describe these steps in more detail. Pages *i* and *ii* summarize the full report, and include helpful links to enable readers to easily find applicable information.

# General Green Purchasing Opportunities

## Two-Page Summary: Identifying and Purchasing Green Products

### WHAT'S IN THIS REPORT?

- The report guides readers through the process of selecting product categories to be “greened,” constructing a green bid solicitation document, and awarding contracts with green products. Each section includes tips and best practices to maximize the green impact of purchasing and save time for purchasers.
- This 2-page summary gives an overview of report contents, linking to useful sections of the full report.

### OVERARCHING RECOMMENDATIONS

- Maximize green impact and minimize implementation effort by using a [prioritization process](#) to select the best contract(s) for greening.
- [Select certifications carefully](#) using established criteria to achieve the most environmental benefits. For example, purchasers should prioritize multi-attribute sustainability certifications over single-attribute certifications.
- To promote [price and product selection competition](#), bid green items separately or allow line-item or multiple awards on contracts with green products.
- Consider [measures to keep costs low](#), such as constructing a green “core” or “market basket” list, aggregating demand among state agencies and other contract users, or using green specifications developed by other states or existing cooperative purchasing agreements.
- Apply green specifications and award criteria to contracts for commodities as well as services.
- Include packaging and end-of-life recycling requirements in contracts, whenever feasible.

### WHY BUY GREEN PRODUCTS? (page 1)

- Help the State meet its sustainability goals such as commitments to reduce energy consumption and greenhouse gas emissions, minimize waste, and avoid the use of highly toxic chemicals, which can harm workers, other building occupants, and the environment.
- Save money by lowering the state’s use of electricity, fuel, water, paper, or other resources. And, some green products, such as remanufactured toner cartridges, have a lower upfront cost.
- Create new environmentally responsible jobs (i.e., promote “green” growth) within the state.

### BEFORE BIDDING... (page 2)

- Consider internal needs, such as agency greening goals or waste/energy use/toxics reduction targets
- Identify upcoming contracts, and rank them based on green impact and ease of implementation with a Prioritization Tool, such as [RPN’s Sustainable Purchasing Prioritization Tool](#).
- Consider cooperative purchasing opportunities, through the [Western States Contracting Alliance \(WSCA\)](#), the [National Joint Powers Authority \(NJPA\)](#), [TCPN](#), [U.S. Communities](#), etc.
- Investigate availability of other states’ “greened” contracts that may serve as a model.

*For more, see: [Appendix A – Prioritization Factors and RPN’s Prioritization Tool](#)*

### GREEN CERTIFICATIONS AND STANDARDS (page 5)

- Avoid being fooled by “greenwashing.” If available, require products to have independent, third-party environmental certifications developed through a public, transparent, and broad stakeholder process.
- Reference multi-attribute certifications, when possible, which are based on a more complete assessment of environmental impacts than single-attribute certifications or standards.
- Verify the credibility of certifications and standards that have been developed by industry trade associations, which can be strong or weak. To quickly find information about various eco-labels, go to [Eco-label Index](#), see the Responsible Purchasing Network’s [fact sheet](#) on credible eco-labels, or call RPN at 866.RPN.1330.

*For more, see [Appendix D – Certifications and Other Eco-labels](#)*

### BID SPECIFICATIONS (page 9)

- First, assess the availability of contracts from other states that could be joined or used as a model for environmental specifications, bid evaluation criteria, green bid or core lists, for the product category you are considering greening. Sustainable procurement resources you can consult the following:
- Environmentally Preferable Purchasing Network ([EPPNet](#)), an electronic list-serve that purchasing agents can use to contact their peers with green procurement-related questions (including an [archive](#) of answers to such questions spanning 2007 to 2011); and
- RPN’s [Responsible Purchasing Guides](#), which cover over a dozen product categories.

### **Set Minimum Requirements (Specifications)**

- Set bold but pragmatic minimum requirements that will allow for multiple, competitive bids.
- Use strong certifications, when available, for the product category you are addressing.
- If green products are similar and equivalent in quality and price to non-green products used in the past, make environmental specifications mandatory, and/or bid them separately from conventional products to ensure that they are available to contract users.
- Add green specifications to applicable service agreements such as contracts for cleaning, facility maintenance, food service, pest management, landscaping and recycling.

### **Lower the Cost of Green Products**

- Consider going out to bid for green products only, to secure higher price breaks from vendors.
- Construct a green “core” or “market basket” list to ensure that vendors’ deepest discounts are applied to environmentally preferable products.
- Consider whether green products have lower “total cost of ownership” based on a life-cycle cost analysis (LCCA); keep equivalent conventional products on contracts only when the LCC is higher.
- Consider offering a price preference for green products and services.

### **Encourage the Best Selection of Green Products**

- Go out to bid for green products separately, so exclusively green vendors can compete.
- Allow for line-item awards or multiple awards to encourage a wide selection.
- Promote the bid solicitations with green specifications more widely to reach new vendors.
- Consider holding a pre-bid meeting to educate new vendors about the State’s bidding process and all vendors about the environmental specifications.

### **Develop a Green Bid List**

- If bid solicitation uses a “core” or “market basket” list, this should be greened. To encourage vendors to offer the highest discounts on green products, let them know you plan to buy large quantities of green items by removing similar non-green products from the bid or core lists.
- Give clear instructions (either written and/or in a pre-bid meeting) to bidders explaining how they should document compliance with the State’s environmental specifications. Explain any “Green Point Weighting” or vendor evaluation process. Leave time for bidders to ask questions.

### **ONCE THE BIDS ARE IN... (page 16)**

- **Best Ways to Award:** Allowing for line-item or multiple awards will increase selection and price competition for green products.
- **Verify Compliance:** Confirm that products meet environmental requirements. Most third-party certification organizations maintain lists of compliant products on their website.
- **Evaluate Performance:** If needed, require product samples and arrange for pilot tests by users.
- **Evaluating Price:** Account for any green price preference, or use life-cycle cost analysis to compare.

### **VENDOR EVALUATION (page 14)**

- Maximize green impact by giving credit in the bid evaluation process to vendors that offer a wide array of environmentally preferable products, particularly those with third-party certifications, as well as effective green product labeling, sustainable packaging and transportation, “green spend” tracking capabilities, product take-back, and more.

*For more, see: [Appendix E – Vendor Sustainability Questionnaire](#)*

### **MAXIMIZE GREEN IMPACT (page 18)**

- To **promote the green products** once they are added to your contracts, consider highlighting green products in internal communications, setting goals for conversion to green options, etc.
- **Track and report your state’s green purchasing activities.** This will help to measure impacts and improvement over time, identify upcoming opportunities, and publicize your accomplishments.

*For more, see [Appendix F – Green Purchasing Calculators](#)*

### **WHAT’S ON THE HORIZON?**

- Green Seal, EcoLogo, and other certification organizations continually update their standards and increase the number of products certified. It is important to check the availability of certified green products from vendors in the region before incorporating certifications into your bid specifications, particularly as mandatory minimum requirements.
- New emerging bid specification models and additional useful materials will be made available through the [National Association of State Purchasing Officials’ Green Resources webpage](#), [EPPNet](#), and the [Responsible Purchasing Network](#).

# GENERAL GREEN PURCHASING OPPORTUNITIES

## Why Buy “Green” Products?

State procurement offices typically handle hundreds of statewide and agency-specific bid solicitations each year. Traditionally, the procurement process has entailed specifying products and services based on technical/performance criteria and evaluating the bids based on the lowest responsive, responsible bidder. With an increasing number of states embracing sustainability goals, there is a growing focus on procurement initiatives that can:

- Help the State meet its sustainability goals such as commitments to reduce greenhouse gas emissions, minimize waste generation rates; improve air and water quality; preserve biodiversity; phase-out the use of highly toxic chemicals in order to protect workers, building occupants, and the environment, etc.;
- Save money by lowering the State’s use of electricity, fuel, water or paper;
- Create new environmentally responsible jobs (i.e., promote “green” growth) within the state;
- Serve as a proving ground for innovative technologies that offer measurable environmental and health benefits; and
- Have a transformational effect on the marketplace.



## BEFORE BIDDING...

### Prioritizing Green Purchasing Opportunities

Planning and prioritization activities are an important aspect of a successful green purchasing program because they focus attention on actions that can yield the greatest environmental and financial benefits. They also enable States to have sufficient time to add green criteria to their contracts by identifying upcoming opportunities before the contract development process is too far along to easily influence it.

The identification of high-priority green purchasing opportunities typically includes a process of finding contracts that, if “greened”, would yield the following benefits:

- substantial electricity, fuel or water savings;
- increased use of recycled content;
- reduced potential releases of highly hazardous materials such as mercury, lead or other persistent and bioaccumulative toxins (PBT); or
- reducing worker exposure to chemicals that are known to cause cancer, asthma or other harmful health effects.

### How Can State Governments Identify Their Best Green Purchasing Opportunities?

Considering a few key factors can help to maximize environmental benefits and budgetary savings, while minimizing time and effort for procurement staff. The process of identifying priorities can also take into account policy goals and the needs of contract users. The following key factors are fleshed out in more detail in [Appendix A](#), and will help States prioritize contracts for greening:

#### *Will the Contract Have a Significant “Green” Impact?*

- Is there potential for significant environmental or health benefits?
- Is the product category high usage or high spend?

#### *Will Greening be Easy to Implement?*

- Can greening happen during re-bid or contract extension?
- Are there cooperative purchasing opportunities or existing model specifications?
- Could this be an easy or high-profile win?
- Are there third-party certifiers or standards that help identify green products?
- Are green products readily available in this product category?

#### *Will this Greening Strategy Meet Internal Needs?*

- Are priorities coordinated with policy drivers and goals?
- Does greening respond to and meet agency needs?

For more information on each prioritization factor, see [Appendix A](#).

If more products seem to be good candidates than can be handled at once, or if the decision-making body wants to develop a green purchasing action plan, it may want to use a [Sustainable Purchasing Prioritization Tool](#), which has been specially designed by RPN to facilitate a more formal green purchasing prioritization process.

Green purchasing is most effectively done as a team. Many successful green purchasing programs find that a Green Purchasing Team is key to their success. This Team is commonly composed of representatives from offices responsible for environmental protection and procurement, as well as major agencies that operate facilities and grounds, maintain fleets, run correctional or health care facilities, oversee food service operations, etc. Since the Green Purchasing Team representatives collectively have knowledge of the commodities and services that are used by their agencies, they can more effectively identify and prioritize potential green opportunities than individual purchasers can on their own. They can also help identify end-users, conduct outreach, and track green spending in their agencies.

Of course, a prioritization process is not necessary in all cases. If a contract comes up for bid and greening it is likely to yield a significant environmental benefit, contract specialists are encouraged to incorporate green standards whenever possible. The factors included in [Appendix A](#) and [RPN's Sustainable Purchasing Prioritization Tool](#) can provide guidance for evaluating a single contract for greening, as well as comparing more than one contract.

## Investigate Cooperative Purchasing Opportunities for Green Products

Before constructing a bid solicitation, it is important to decide whether it is needed at all. Cooperative purchasing agreements are available in many different forms and allow a state purchasing office to utilize an already-existing contract. Some are provided under state alliances (listed below) that negotiate favorable prices on contracts open to other states or local governments. One of these might provide exactly the products necessary, with good green options as well as conventional ones, when needed. Utilizing an existing contract can save purchasers a tremendous amount of time by reducing their workload since the contract has already been competitively bid and awarded, and often there is no or very little cost to participate. States may also save more money using a cooperative contract than they would by going out to bid on their own because they will be aggregating demand – especially if they are able to participate in the bid solicitation process while the cooperative contract is being developed.

Beware that not all cooperative contracts include a good selection of green products, however, and even those that do have not always negotiated the best prices for them.

Fortunately, an increasing number of cooperative contracts are available that offer a wide array of green products with relatively high discounts. Some common cooperative purchasing organizations include:

[Western States Contracting Alliance](#) (WSCA) was originally formed by the state purchasing directors from 15 NASPO (National Association of State Purchasing Officials) western States so that participating states could join together in cooperative multi-state contracting. Green products available on WSCA's contracts include, but are not limited to:

- Green Seal- and EcoLogo-certified cleaning products
- Janitorial paper and soap products
- Recycled-content office supplies and trash bags
- Remanufactured toner cartridges
- ENERGY STAR building equipment
- EPEAT-rated computer equipment
- LED light bulbs
- Hybrid electric vehicles

**U.S. Communities** Government Purchasing Alliance, affiliated with the National Association of Counties, is a government purchasing cooperative with a **Go Green Program**, which is a good first stop to find green contracts. Participants have access to a broad array of contracts, many of which include green products including, but not limited to:

- Environmentally preferable carpeting (and carpet recycling services)
- Low-emitting (GREENGUARD-certified) furniture
- Energy-efficient lighting equipment (e.g., LEDs)
- Recycled-content paper and other office products (available from small office supply vendors)
- Green Seal- and EcoLogo-certified cleaners, floor care products, and hand soaps



**TCPN** (The Cooperative Purchasing Network) is a national governmental purchasing cooperative that leverages the purchasing potential of government entities in all 50 states. Green products on TCPN's contracts include, but are not limited to:

- Recycled paper and office supplies
- Remanufactured toner and ink cartridges
- Low-emitting (GREENGUARD-certified) flooring products
- ENERGY STAR-rated building equipment
- Green Seal- and EcoLogo-certified cleaners and hand soaps

**EPPNet**, a list-serve hosted by the Northeast Recycling Council, is a good source for leads on other governments' contracts that might offer green products and services. Even without a formal cooperative purchasing agreement, some vendors will allow non-contracting governments to purchase products on a negotiated contract at the same purchase price as the original contracting agency. If your State wants to use on a cooperative purchasing contract, check to be sure that it was solicited using the green specifications that fit your government's preferences and offers a suitable number of green products with competitive pricing.

In addition to becoming a *user* of cooperative contracts, States can become the *lead state* on a new contract for green products or services that can be used by other states. In 2010, Massachusetts collaborated with four other contiguous states to develop a regional contract for green cleaning products. States can also participate on the sourcing team when new cooperative purchasing agreements (for products that offer green purchasing opportunities) are being discussed by organizations such as WSCA. This participation can be formal or informal. For example, States can send a list of green products and services they would like to see added to the bid or core list.



## GREEN CERTIFICATIONS AND STANDARDS

Appropriate and effective green specifications require research into the green product category, just as any product requires research on the technical specifications before being put out for bid. One of the first places to start is to investigate whether any other states (or municipalities) have already developed green specifications for this product category. You can connect with other green purchasing champions by sending an email to the Environmentally Preferable Purchasing Network (EPPNET) list-serve or by contacting RPN (at [info@responsiblepurchasing.org](mailto:info@responsiblepurchasing.org).) If you find one or more jurisdictions that recently greened a contract that you are interested in, ask them to share their specifications and tell you whether their bid solicitation resulted in a successful green purchasing initiative. How did the solicitation work? Is there anything they would do differently? Also, make sure their specifications are current as green standards are quickly evolving.

The next step typically entails conducting market research. The best place to start is often with your own vendor(s). Ask them whether they offer any green products in the category you are evaluating. You may be surprised to learn that there are green products available on your contract(s) that you were not aware of.

### Don't Get Greenwashed!

Have you seen these environmental claims on products?

- Biodegradable
- Earth-friendly
- Eco-safe
- Natural
- Practically non-toxic



Unfortunately, because these claims have no legal definition and are not verified certification organization, they don't mean that a product is "green."



*Greenwashing* is the practice of misleading consumers about the environmental or health benefits of a product or service. Manufacturers or distributors sometimes do this by marketing goods and services with vague or unsubstantiated environmental claims, including in some case self-developed eco-labels. Other examples of greenwashing include the use of inaccurate information (e.g., saying something is non-toxic when it contains a toxic chemical, or highlighting a product's single environmental benefit while ignoring other significant environmental hazards). For more information about greenwashing, visit [UL's The Sins of Greenwashing website](#).

The most effective strategy states can use to ensure that the products offered on their contract offer **real** environmental or health benefits is to require vendors to verify all of their environmental and health claims. For example, they can require vendors to submit with their bids evidence of their products' environmental and health benefits (such as verification that a product contains recycled content). Below is some sample language:

*Suppliers citing environmentally preferred product claims shall provide proper certification or detailed information on environmental benefits, durability and recyclable properties.<sup>1</sup>*

## Use of Green Product Certifications and Other Eco-labels in Bid Specifications

Purchasing products that have their environmental and health benefits certified by an independent nonprofit organization or government entity is one of the easiest and most effective ways to ensure that products offered by vendors actually meet the environmental standards that manufacturers or vendors claim they do. Look for eco-labels that:

- Were developed by an independent third party;
- Were developed in a public, transparent, and broad stakeholder process; and
- Represent specific and meaningful leadership criteria for that product or service category.

When looking for a certification, it may be useful to follow recommendations identified by the [International Organization for Standardization \(ISO\)](#), such as their pointers on ["Choosing a Certification Body."](#) Certifications that meet ISO standards are a good starting point.

The Commonwealth of Massachusetts operates under a 2009 Executive Order #515: Establishing an Environmental Purchasing Policy, which allows them to use specific eco-labels when making procurement decisions. This policy states:

*The EPP Program shall, when appropriate, utilize independent, third party standards and certifications, including but not limited to Green Seal, EcoLogo, ENERGY STAR, (U.S. Department of Agriculture's) BioPreferred, Leadership in Energy and Environmental Design (LEED), GREENGUARD, Forest Stewardship Council (FSC) and others, to verify the environmental claims of products or services.<sup>2</sup>*

The clearest way to navigate through the eco-labels is to establish a decision-making hierarchy that gives preference to multi-attribute certifications over single-attribute certifications, certifications over rating systems, and all of these over industry-developed eco-labels, which should be used with caution.

Multi-attribute certifications (e.g., those developed by Green Seal or EcoLogo, etc.) are preferable to single-attribute certifications because they are based on a more complete assessment of a product's overall environmental impacts, thereby preventing environmental and health tradeoffs. For example, Green Seal's GS-37 standard for institutional cleaners includes criteria for asthmagens, carcinogenicity and reproductive toxicity, skin and eye irritation, aquatic toxicity, biodegradability, materials used in packaging, performance, vendor training, and more.



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<sup>1</sup> University of California, *Sustainable Practices Policy* (2011).

<sup>2</sup> Commonwealth of Massachusetts, *EO 515: Establishing and Environmental Purchasing Policy* (2009); <http://www.mass.gov/governor/legislationexecorder/executiveorder/executive-order-no-515.html>

That said, for many product categories a multi-attribute certification does not exist. In such cases, states can include in their specifications one or more single attribute certifications. Such certifications should apply to the primary – or at least a major – environmental or health attribute of the product or service. Some of the most commonly used single-attribute eco-labels include:

- The US federal government’s ENERGY STAR label, which now has a worldwide reach;
- The US Department of Agriculture’s Biobased Certified label, which verifies that products contain at least a minimum amount of plant-based material, typically in lieu of petroleum;
- The Biodegradable Products Institute’s certified compostable label, which verifies that a product made of a “biobased” plastic is “commercially compostable”; and
- UL Environment’s GREENGUARD certification system for “low-emitting” products, which is designed to protect indoor air quality from products such as furniture and flooring materials that can “off-gas” pollutants.



**Shades of Green**

Most green certifications are issued on a pass/fail basis. Either the product qualifies for the eco-label by meeting all of the criteria in the standard or it does not. Some eco-label programs, such as the Electronic Products Environmental Assessment Tool (EPEAT), work on a tiered system. Products evaluated using the EPEAT rating system are awarded either a bronze, silver or gold rating based on the number of environmental attributes they can document.



Similarly, the US Department of Energy and U.S. EPA recently developed a top-tier rating system for the most energy-efficient equipment called *ENERGY STAR Most Efficient*. This eco-label is awarded to a small percentage of ENERGY STAR-qualified products that are in the top of their class for energy efficiency.

Not all eco-labels are reliable. Some are self-serving and represent greenwashing. Others are not rigorous enough to ensure true sustainability. [Appendix D](#) presents a sample listing of certifications that are considered reliable for several specific categories of green products.

**Single-Attribute Green Claims**

Many single-attribute environmental claims are not verified. Relying on these claims – even when there is an eco-label – is risky and may result in greenwashing. They should be used with caution. Nevertheless, there are some single-attribute environmental standards that are commonly referenced in bid solicitations – even when they are not verified. Below is an example:



The U.S. Environmental Protection Agency (EPA) has established minimum recycled-content standards (called Comprehensive Procurement Guidelines) that all federal agencies must use when purchasing products in several [categories](#) including office and janitorial supplies. Most U.S. States and many local governments reference these federal standards in their environmental purchasing laws, executive orders, and best practices guidance documents. The result is that recycled-content products meeting at least the low end of the range within the standards are widely available and usually cost-competitive. The EPA does not verify the recycled content of products that claim they are *EPA-Compliant*, although some green product certification organizations (such as Green Seal and EcoLogo) verify the recycled-content levels when they certify products as “green” overall. See [Appendix B](#) for more information about the [EPA’s Comprehensive \(Recycled Content\) Procurement Guidelines](#).

The presence of recycled content is a "single-attribute" criterion that has multiple environmental benefits because recycling, by its nature, reduces many different environmental impacts at once, typically energy and water use, natural resource depletion, pollution (including greenhouse gas emissions), solid waste generation, and more.

### ***Industry-Developed Eco-Labels***

In some product categories, trade associations of manufacturers have developed their own eco-labels. These should not be referenced in bid solicitations without being well researched. Often, independent certifications for the same product category are available that are stronger and have greater verification or accountability. Independently verified eco-labels best shield purchasers from concerns about favoritism. If a single manufacturer has developed its own eco-label, it should be treated with caution, as referencing it could discourage competition or narrow the product field dramatically.

# BID SPECIFICATIONS

## Adding Green Products to Bid Solicitations

A State or another government entity that is designing its own bid solicitation will need to decide how to incorporate green specifications and/or preferences for the specific products into its bid documents. Below are some options.

### *Specifying a Single Certification or Rating*

In some cases, enough products have achieved certification that a determination can be made that if is included as a mandatory requirement (specification) it is likely to result in competitive and responsive bids. Examples of this include specifications for Green Seal-certified cleaning products, EPEAT-registered desktop computers, or ENERGY STAR-qualified appliances. With other product categories, there may not be enough green-certified or qualified products to predict that there is likely to be sufficient competition. In such cases, the certification (or another green attribute) can be referenced in a section of the bid solicitation that awards extra points for green products meeting that criterion.

### *Allowing for Different Certifications of the Same Attribute*

If two or more certifications are determined to be equivalent, then the specification can allow suppliers to offer products with either certification. This increases the number of products that can meet your green specifications, thereby increasing the likelihood that you will receive competitive bids. A sample specification could read: *Foaming hand soap, 1liter refill, Green Seal- OR EcoLogo-certified products only.*

### *Specifying More Than One Certification to Account for Different Attributes*

In some cases, it may make sense to require products to have two different green certifications (or meet two different standards) in order to qualify as a green product. This approach is generally used when the certifications or standards cover completely different criteria. For example, specifications for screw-in LED light bulbs may require qualifying products to be ENERGY STAR-rated AND RoHS compliant. (The latter is an eco-label that is given to electronic products that are devoid of lead and other highly toxic heavy metals and flame retardant chemicals, which indicates compliance with the European Union's Restriction on Hazardous Substances Directive). This ensures that the product is both energy efficient and devoid of lead in its solder and other components.

Any government entity that is serious about developing an EPP program should expect to integrate green products into its contracts as completely as possible. This may mean starting with contracts that provide products that are easy to green and easy for staff to adapt to, such as office products and janitorial paper products. It may mean starting with a pilot project, with intent to expand that to the entire contract in the next year. It may mean gaining a commitment from one or more agencies to convert to the green product and serve as a testing site and model for the rest of the agencies that will convert later. It also may mean adding green products to a contract that also offers conventional products, and then allowing contract end-users to choose when the green product when it meets their needs.

## Important Questions to Consider While Constructing a Bid

### *Should the Green Products be Mandatory?*

This is a good choice when they are equivalent in quality and price to the conventional products previously bought and employees are comfortable with using them. You may want to allow enough time during the pre-bid process for education and performance tests to confirm the quality comparisons for employees. Below is some sample language that can be tailored to a bid solicitation that is requiring green products to be certified:

*“Products/services purchased under this contract must be \_\_\_\_\_ certified or provide demonstrable proof of meeting the \_\_\_\_\_ standard and certification requirements. The \_\_\_\_\_ standard and certification requirements are available at <\_\_\_\_\_>.”*

### *Should the Green Products Be Bid Along With Conventional Product Alternatives?*

This may be necessary if products are different enough from ones used in the past or are significantly more expensive than conventional items (e.g., certified compostable food service ware). However, unless there are dedicated education efforts over the lifetime of the contract, employees may be resistant to changing to products unfamiliar to them. User education, tracking and goal-setting can help maximize use of green products added to contracts.

### *How Can the Expected Volume of Green Products be Determined?*

It’s a good idea to require vendors to provide detailed tracking reports on a regular basis, if possible. This can also be done internally, if the State has capacity. See the [Tracking and Reporting](#) section below for more information about how this can be most easily accomplished.

### *Can Green Specifications Be Added to Service Agreements?*

Absolutely. This is one of the easiest ways to increase the use of green products. Contractors that are providing cleaning, painting, or even food services can be required to or rewarded for using certified green products. Some certifications apply specifically to services such as the eStewards certification for electronics recycling, or Green Shield certification for “integrated” pest management.

### *What Steps Can States Take to Try to Lower the Cost of Green Products?*

Green products do not always cost more! Some can even save money over previously contracted conventional products. But there are certainly cases in which they do cost more. While cost is a critical deciding factor for most contracts, it is not the only factor. When it is apparent that the green options may cost more, there are several approaches that can be taken to drive the price down:

**Contract for green products only, to secure higher price breaks.** In product categories where the green products have been successfully used in the past and/or prices are closely competitive, the most effective strategy for securing competitive pricing is to simply specify those products only. Vendors will see that the State is committed to buying green products and will likely offer their best available price breaks.

**Promote the use of green products offered on State contracts.** When vendors offer multiple competing products, employees may choose the non-green option out of habit or without noticing. Consider requiring vendors to provide an online ordering system that will block non-green options. It may be useful to do this across multiple contracts. For example, if a State negotiates a dedicated

contract for high-performance lighting equipment, it can block sales of less-efficient lighting equipment on its general hardware supplies contract.

**Construct a green core or market basket list.** A contract with both green and conventional products may place green products at serious, unfair disadvantage if non-green products win the biggest discounts because they appear on a “core” or “market basket” list. Adding green products to the core list (and removing the equivalent non-green option) is another way to demonstrate to vendors that the State is serious about transitioning to the use of green products, which can result in further discounts and price breaks. If core list prices are used to evaluate the contract, this will also help the State select the vendor with the best green product prices.



For states to “green” their core/market basket list, they will need to review each item on the conventional (non-green) core list and identify an equivalent green alternative that can be either added or serve as a replacement. (Vendors may be able to help identify green alternatives in their product offering.) For example, if the core list includes virgin (non-recycled) copy paper, you can add or replace it with recycled copy paper that has a minimum of 30% post-consumer recycled content. If there is no current core list, one can be created by analyzing high-spend items, or those purchased in high volume over the past year or during the entire contract term. Green items can be easily added to a core list. For example:

**SAMPLE BID SOLICIATION WITH CONVENTIONAL PRODUCT AND ITS GREEN ALTERNATIVE**

Product Description (Including Green Criteria)	Unit of Measure	Price
<b>Conventional Product</b>		
Copy paper, white, 8.5” X 11”, 20 lb. weight, 500 sheets per ream, 10 reams per case	1 case	VENDOR INPUT
<b>Green Product</b>		
Copy paper, white, 8.5” X 11”, 20 lb. weight; 500 sheets per ream, 10 reams per case; <i>30% minimum post-consumer recycled content</i>	1 case	VENDOR INPUT

***What Can States Do When a Green Product Still Has a Higher Upfront Cost After Market Basket Discounts?***

**Consider whether green products represent the lowest “Total Cost of Ownership” based on a life-cycle cost analysis.** As noted earlier, many green products are more efficient and/or have a longer life than conventional products. Consequently, even if they have a higher initial cost, they can often pay for themselves over a relatively short period of time and represent the best economic value when operating, replacement and disposal costs are considered in addition to upfront costs. If so, you can often justify adding them to the bid solicitation without needing to conduct an LCCA during the bid evaluation process.

If you use functional specifications and/or if the options likely to be bid are fundamentally different from each other (for example, paper hand towels versus electric hand dryers), States can require bidders to provide sufficient data about their product for you to conduct a life-cycle cost analysis. This is described in more detail in the [Evaluating Alternatives](#) section below.

Note: One way to make green purchasing the default practice is to require the purchase of products such as ENERGY STAR-rated appliances or EPEAT-rated desktop and laptop computer equipment UNLESS a purchasing agent or end-user can demonstrate that the green product won't work for a particular application due to cost or functionality.

**Offer a price preference for green products.** This enables the green option to be considered competitive as long as its price falls within a specified percentage from the lowest responsive conventional alternative's price. Purchasers sometimes worry that a price differential will simply increase the cost of the contract by the percentage allowed. But this is not generally the case, especially because the conventional product bid price will be unknown until after all the bids are in. Rather, a price preference can give enough room for green products to qualify while their markets are still developing. As those markets mature, their cost is likely to trend closer to their conventional competitors.

**Set up a point system** that rewards green products and services. Products can be awarded extra points for desirable but optional attributes such as recycled content, reduced energy or water consumption, packaging reduction, reduced toxicity, vendor sustainability achievements, or other factors. Similar to the price preference, this allows the green products to be included on contracts even when they may have slightly higher prices. It also recognizes that they embody valuable environmental contributions that often are not calculated into the price of the product. By rewarding environmental benefits in the bid evaluation process, it formalizes the best value analysis. For more information about how to award contracts based on best value, see the [Evaluating Alternatives](#) section below.

### ***How Can the Best Selection of Green Options Be Encouraged?***

Often, a conventional vendor may carry some green products but not a wide variety, and the green products vendor may not carry conventional products at all. In such cases, it may be necessary to solicit bids for the green products separately from conventional products rather than requiring a single vendor to provide both. This can be accomplished by developing a separate bid solicitation for green products or by allowing bidders to make offers on individual line items or categories of products (e.g., a green products list). If the latter bid evaluation method is used, the State may need to issue multiple awards to ensure a sufficient supply of green and conventional products.

It is recommended to publicize your new green bid solicitation widely. The vendors with the widest selection of green products may be focused on consumer markets and may not be aware of your bid. One way to find distributors of green products is to contact the certifier you have chosen to distinguish your green products, who can then pass information along to vendors of certified products.

Consider holding a pre-bid meeting, preferably early on in the contract development process. This will enable you to collect market availability and performance information from vendors in the region and give potential bidders time to become a State-approved vendor or set up an arrangement to



subcontract with a vendor that is already pre-qualified to sell to the State. You may also want to hold a meeting immediately after the bid solicitation has been issued to make sure bidders understand your specifications and bid evaluation procedures.

## Easy Green Purchasing Language

States can make green purchasing a default activity by notifying bidders in all their solicitations about their commitment to purchasing environmentally preferable products as well as some important procedures they expect vendors to follow to help them advance green purchasing in their state. Below are some examples of boilerplate language that can be added to bid solicitations to facilitate effective green purchasing.

### *Third-Party Green Certifications, Or Other Verification of Claims*

Specifying products that meet third-party certifications is an easy way to verify a product's environmental claims. This provides another level of assurance that you are achieving the environmental benefits you desire. At the same time, purchasing green-certified products and services provides a visual cue to employees of your State's commitment to environmentally preferable purchasing and makes tracking green product purchases easy. If a formal green *certification* is unavailable for a particular product category, States can require *verification of claims* by third-party organizations or through the submission of independent laboratory results.

#### **Sample Language**

*Suppliers citing environmentally preferred product claims shall provide proper certification or detailed information on environmental benefits, durability and recyclable properties.*

### *Use of Environmentally Preferable Products*

To promote and encourage environmentally sustainable practices for companies doing business with the State, vendors under State contract can be required to use environmentally preferable products.

#### **Sample Language**

*Contractors should use environmentally preferable materials that meet performance requirements wherever practical in the fulfillment of this agreement. Environmentally preferable products and services have characteristics that include, but are not limited to, the following:*

- Energy or water efficient
- Reusable or upgradeable
- Recyclable
- Contain postconsumer recycled materials
- Produce fewer polluting byproducts or safety hazards during manufacture, use, or disposal
- Are certified by an independent, third-party eco-label (e.g., Green Seal, EcoLogo, etc.)<sup>3</sup>

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<sup>3</sup> City of Eugene, Sustainability Specifications (provided via email).

## VENDOR EVALUATION

Using a [Vendor Sustainability Questionnaire](#), buyers can identify vendors than are willing to offer additional environmental products and services on their State contracts such as the use of sustainable packaging and transportation methods, clear labeling of their environmentally preferable products, “green spend” reporting, and more.

### Elimination of Unsustainable Packaging

Environmentally preferable purchasing not only addresses the product itself, but also considers how it is delivered to the end-user. States can request packaging that is designed to minimize waste and is easily recyclable or reusable.

#### Sample Language

*Describe the delivery packaging, and the recyclability thereof, that will be used for the proposed products. Specifically address:*

- Packaging materials used
- Recycled content of packaging materials
- Recyclability or compostability of packaging at State facilities
- Whether packaging is taken back by your firm (as part of delivery services) for reuse or recycling
- Your firm’s efforts to minimize packaging without compromising product quality and integrity<sup>4</sup>

*Contractors shall eliminate [insert specific prohibitions on packaging such as PVC or polystyrene due to environmental and human health concerns].*

### Vendor Assistance with Tracking “Green Spend”

Vendors can be notified in bid solicitation documents and contracts about the types and frequency of information they will be asked to provide to the State either during the bidding process or over the term of the contract, respectively. This should include reporting of the dollar amount of green products they sold to the State in the prior year, if applicable. Vendors can be asked or required to track only sales of products with verifiable green attributes (unless you allow for reporting of products with unverified environmental attributes such as recycled content, or that are inherently green such as rechargeable batteries or remanufactured toner cartridges.) Products should not fall into a catch-all “green” category, but should be specifically coded to enable the State to produce reports indicating the amount spent on products with specific green attributes such as ENERGY STAR-rated, Forest Stewardship Council-certified, powered with solar panels or made with a high enough percentage of recycled content to meet EPA’s guidelines (i.e., EPA-compliant).

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<sup>4</sup> City of Portland. Electrical and Electronics Supplies Specs.

<http://www.portlandonline.com/omf/index.cfm?c=53454&a=373989&showpollresults=1/>

## Sample Language

*Contractors are required to provide [frequency and type of reports quantifying products with green attributes] purchased under this contract. This report shall contain the detail required by [State], which may include, but is not limited to, type and quantity of product purchased with the following green attributes [that have been deemed acceptable by the State Purchasing Office (SPO)].<sup>5</sup>*

## The Vendor Sustainability Questionnaire

States can extend the influence of their direct purchases by encouraging vendors to go beyond simply offering certain green products and services by implementing sustainable business practices themselves. This can bring value to the State by reducing that business' environmental and health impacts. Their influence can even extend to their supply chains, as well. The [Vendor Sustainability Questionnaire in Appendix E](#) is designed to help purchasing agents evaluate whether their vendors conduct their business ways that yield environmental and health benefits to the State. For example, the survey asks if vendors' facilities are LEED-certified.

## How to Use the Vendor Sustainability Questionnaire

The attached [Sample Questionnaire](#) can be adapted to specific bid solicitations. Not all questions are applicable to every product category, so purchasers may choose questions that are most relevant. (Note: there are tailored versions of this vendor questionnaire in other Green Purchasing Opportunity Assessments that have been developed for NASPO and the State of Washington.)

All vendors may be required to fill out the [Product Details](#) table at the end of the questionnaire to summarize the sustainability attributes of the products they are offering in their bid. For solicitations involving hundreds of products, bidders may instead be asked to fill out the table only for green products on the core/market basket list.

This sample Vendor Questionnaire provides a method for governments to fairly reward suppliers that help the State meet its goals of encouraging the shift to more sustainable manufacturing and distribution processes. For example, it can provide the framework for awarding Non-cost Best Value points during the bid evaluation process. Purchasing agents can expect some vendors to be unable to answer all the questions affirmatively in the additional sections of the questionnaire. In such cases, vendors can be awarded points for the satisfactory answers they do provide. The series of questions provides a roadmap for those suppliers that want to become more sustainable.

A State may *require* vendors to answer certain questions, or in some cases, all questions. If the State, for example, is looking for vendors that offer online ordering, training, or "green spend" reporting, questions about their experience in these areas can be included in the Vendor Questionnaire. For purchasers using a point system (e.g., in a Request for Proposals (RFP)), [Appendix E](#) presents a sample table of weighting and point ranges for scoring the Vendor Sustainability Questionnaire responses during a bid evaluation process.

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<sup>5</sup> King County, *Environmentally Preferable Computers*.

[http://www.kingcounty.gov/operations/procurement/Services/Environmental\\_Purchasing/~/\\_media/operations/procurement/documents/EP\\_Products\\_Electronics\\_Buy.ashx](http://www.kingcounty.gov/operations/procurement/Services/Environmental_Purchasing/~/_media/operations/procurement/documents/EP_Products_Electronics_Buy.ashx)

## ONCE THE BIDS ARE IN...

### Evaluating Green Products and Services Offered by Bidders

Once the bid submission deadline has passed and the resulting bids are opened, the purchaser or bid evaluation team must evaluate each one. The goal should be to find the products that represent the "best value" – an optimum balance between performance, price and environmental benefits.

Depending on the product and its market complexity, evaluating green options may take more diligence than conventional options. Possible steps include:

- **Confirming that the products meet the bid solicitation's minimum environmental requirements.** Does each one actually meet each of the mandatory requirements? The vendor should have filled out a bid sheet, the Product Details Table in the [\*Vendor Sustainability Questionnaire \(Appendix E\)\*](#) or something similar. If the product is new to your agency, you may need to research the product online or request a sample to see whether the product or its packaging's labeling confirms that the product meets the minimum requirements. Check the manufacturer's website or a certifier's listing, if the product holds one.
- **Verifying certifications and claims.** If the vendor claims that the product is certified or complies with another environmental standard, verify that its claim is accurate. Sometimes the vendor does not know the latest information. Claims should be verified by the manufacturers, not by the suppliers; ask for a written and signed statement from the manufacturer affirming any claims that cannot otherwise be verified. Certification status should be verified on the certifier's website, where most list the companies and products that meet their requirements. Call to talk to them if necessary; do not accept applications or incomplete documents as verification.
- **Evaluating pricing.** There are many cases in which the green product is the lowest-cost alternative. But in other cases, it may cost more than its conventional competitors. However, each product bid should be evaluated for "best value" rather than for only lowest first-cost.

If a price preference is available, calculate whether the green products fall within its range. Sometimes the green option is fundamentally different than the conventional alternative, although they meet the same functional needs. An example is powering highway sign illumination with solar panels rather than connection to an electrical grid or a battery. In such a case, the differing economic impacts can be compared by conducting a Life-Cycle Cost Analysis (see below), while additional pollution avoidance can potentially be awarded bid evaluation points.

- **Determining any point awards.** If the bid solicitation was designed to award points for extra environmental services and/or benefits offered by the bidders, the evaluation process is when they must be awarded. Additional environmental benefits, responses to the vendor sustainability questionnaire, and any other qualifying criteria should be added to each vendor's profile. All qualifying claims should be verified in order to avoid challenges regarding the points awarded.

- **Arranging for performance testing, if needed.** Most often, environmental products will either be familiar to the end-users or performance/pilot testing will have been conducted before the bid solicitation was issued. However, sometimes products may be bid that are unfamiliar to your agency. If there is any question about whether their performance meets your needs or technical requirements, request samples that can be evaluated before the contract is awarded. This might be critical information in some cases, such as choosing compostable plastic utensils that cannot be weaponized for incarceration facilities, or plastic trash bags strong enough to withstand being dropped down trash chutes.

## Life-Cycle Cost Analysis (LCCA)

A life-cycle cost analysis (LCCA – see Appendix C) can determine the total cost of ownership (TCO) of a given product by taking into account the cost of acquiring, using and disposing of the product. Performing an LCCA is especially useful when comparing two or more products that meet purchasing specifications, but vary in their initial and operating costs, their replacement cost based on the length of their expected life, and/or their end-of-life disposal costs.

Keep in mind that an LCCA may not be needed if green products’ benefits clearly outweigh additional up-front cost. Products designed to use less water or energy, or reusable products that replace conventional disposables (such as rechargeable batteries) may clearly save money in the long term.

LCCA can be applied to any procurement decision in which higher initial costs can be offset by reduced future costs. In some cases, the product with the highest initial cost will actually deliver the lowest total cost over a given period of time because of improved energy efficiency, low-cost and long-lived consumables, reduced maintenance and labor costs, and/or durability.

There are many different financial analysis models that used to make purchasing decisions. A common method used is the *payback method*, which determines the amount of time it would take for the initial investment to be recovered. However, there are some problems with using the payback method for making purchasing decisions. First, the payback method generally ignores costs and savings after the payback period has ended. Secondly, the payback method may not work well when comparing products with different lifespans.

LCCA is often the best economic analysis method for making green purchasing decisions. It takes into account all costs over time and allows for comparison of alternative services or products. [Appendix C](#) presents guidance on how to conduct an LCCA in a simple way so that anyone making a procurement decision can perform an analysis quickly and easily.

### Difference Between LCCA and LCIA

Performing an LCIA is a different process than an LCCA, which is described in this document. An LCIA is a method of assessing *environmental* impacts associated with all the stages of a product's life from raw materials to end-of-life (also known as cradle-to-grave). In contrast, an LCCA is focused on the *economic* impacts of a given project. While LCCAs can often be easily conducted by purchasing agents to compare the total cost of ownership of competing products, LCIAs are often much more complex and rarely attempted by purchasing staff.

# MAXIMIZE GREEN IMPACT: ADDITIONAL STRATEGIES

## Promoting Green Products on State Contracts

Once green products are added to a contract, the State can increase their usage by publicizing their availability and benefits use among its employees. This is an important step, even when a contract is not yet undergone intentional "greening." Often there are already some green products available through it. Promoting them as well as educating staff about the importance of choosing environmental products as a strategy for helping the State reach its sustainability goals can facilitate greater acceptance of additional green products when they can be added to the State's procurement contracts.

Promoting green products can take many forms, including:

- Labeling green products on the State's or vendors' online ordering systems or catalogs, see example of the Commonwealth of Pennsylvania's green product labeling system, below.
- Highlighting successful use and environmental benefits of the product in internal communications such as a newsletter or email updates.
- Distributing samples of the product to end-users, along with a flyer about its quality, environmental benefits, and price, if relevant.
- Hosting a vendor demonstration of the product for end-users.
- Ensuring that any necessary accessories are available and conveniently integrated into staff members' workdays. For example, converting from conventional disposable batteries to rechargeable batteries requires the purchase of chargers and easy accessibility to them that fits within staff members' work environments.
- Sponsoring competitions for most complete conversion to using the green products.
- Conducting feedback surveys of end-users on their experiences with a particular green product.
- Publicizing the environmental savings that are achieved by using a particular green product. Several calculators exist that can help purchasers and sustainability managers calculate the environmental benefits of green purchasing decisions. A list of relevant calculators is in [Appendix F](#).

The icons listed below were incorporated into [PA eMarketPlace](#) to assist in identifying Commonwealth of Pennsylvania statewide contracts that contain green products. Open the eMarketPlace link and click on the "Search Contracts" section to locate contracts containing products that meet the following requirements:



**EcoLogo**



**EPEAT EPEAT™**



## Tracking and Reporting Green Purchasing Activities, Achievements, and Impacts

An important aspect of procuring green products is establishing a process for tracking how often they are actually purchased by contract users. A green product can be available on a contract, yet rarely be ordered by government agencies, perhaps because employees find it unfamiliar, because it costs slightly more than the product they are used to, or because it requires some behavior changes they would prefer not to make. Tracking green product purchases will help States know how successful their purchasing program has been in replacing traditional non-green products and yielding environmental benefits.

A good procurement tracking system will also enable government entities to pinpoint agencies that have been most adaptable to the new green products and might be willing to help reduce resistance from other agencies, which can also be identified through the program. Those resistant agencies might have good reasons why the products have not worked for them, and careful listening might help resolve the problems and improve adoption.

Some State procurement offices can generate data from their purchasing records to help them determine which products have been bought by specific agencies, their cost, and the products' environmental attributes. Other offices rely on the individual agencies to generate reports on their green purchasing accomplishments or direct their vendors to provide those types of reports. One benefit of vendors' reports is that they often are capable of capturing State agency purchases that occur off-contract, such as through on-line or P-card sales and even in their retail stores.

Purchasers should spell out in their bid solicitation and contract the types of data they expect the successful vendors to be able to supply. Environmental attributes should be coded individually, so that a vendor (or the purchasers' own spend reports) can separately produce reports showing products with specific environmental attributes, although it is important to avoid double-counting products with multiple environmental attributes. A general description of "green" products is not sufficient, especially if your bid specification required products to have a specific eco-label or meet minimum recycled-content standards. Vendors should ideally track those products they sold to State contract users that are ENERGY STAR-qualified, EPEAT-registered, or Green Seal-certified, or that meet other verifiable environmental criteria.

The process of tracking can help States document achievements that can inform the administration, the legislature, the public and/or any other stakeholders about the success of the State's green procurement program. Case studies or references to these successes can, in turn, stimulate more participation in the program. At the same time, tracking can pinpoint areas in a State's green purchasing program that need strengthening and help it identify the next green product areas to focus on. An annual green purchasing report can be used to financially justify an EPP program's existence, especially when it demonstrates that the program helped the State meet statutory mandates, achieve environmental policy goals, and/or save money.

RPN provides two extended templates that can be downloaded and used to set up tracking and reporting procedures. [The Model Responsible Purchasing Report](#) is intended to be "plug-and-play;" users can input their data to customize it as their own. In addition, RPN's [Model Reporting and Tracking Guidance](#) document provides step-by-step directions to filling out the Purchasing Report's template, along with useful examples.

## Additional Green Purchasing Resources

Several states, as well as many local governments, have highly developed green purchasing programs that can inspire and educate those just starting out, as well as those looking for models in particular product categories to expand their already established green procurement programs. [Appendix G](#) lists several resources developed by States, including best practices manuals and websites that share a wealth of information on their green purchasing program successes, obstacles, and results.

Another valuable resource is [EPPNet](#), an online list-serve hosted by the Northeast Recycling Council. Managed as a Yahoo! Group, members share green purchasing strategies, specifications and more. EPPNet is free, and open only to federal, state and local government purchasers and green procurement specialists. The wealth of expertise available there is immensely helpful to both novice and experienced green purchasing officials alike.



In addition, all State purchasing offices have a membership in the [Responsible Purchasing Network](#) (RPN) through NASPO. RPN is an international network of buyers dedicated to environmentally and socially responsible purchasing. It offers a wide array of resources including product-related purchasing guides, webinars, fact sheets, model policies and specifications, and more. NASPO also maintains a website that features a [Green Purchasing Guide](#) for State procurement officials.



## Credits

*Green Purchasing Opportunities and Best Practices* was written by Susan Kinsella and Alicia Culver, January 2013.

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**For more information, contact:**



**Responsible Purchasing Network**  
1440 Broadway, Suite 901  
Oakland, CA 94612  
o :: [510.547.5475](tel:510.547.5475)  
f :: [510.452.5475](tel:510.452.5475)  
[www.responsiblepurchasing.org](http://www.responsiblepurchasing.org)

*Because Every Purchase Matters.*

## Appendix A:

# Factors That Influence Green Purchasing Prioritization Decisions

Successful green purchasing programs typically undertake a periodic action planning process to identify and prioritize upcoming opportunities. The sustainable procurement prioritization assessment can screen upcoming contracts to evaluate potential environmental/health benefits, cost saving opportunities, contract rebidding schedules, staff capacity and other factors when determining where to focus the program's upcoming green purchasing activities. [RPN's Prioritization Tool](#) can help with this. Typically, a good green purchasing opportunity will be:

- **Likely to yield significant** and measurable environmental, health and/or economic **benefits**;
- Relatively **easy to implement** due to the presence of existing green product certifications and specifications, and wide availability of reasonably priced, high-performance green alternatives in the marketplace; and
- Coordinated with the motivations of buyers and users, so that green impacts help to **meet policy goals and the needs of agencies**.

The State Procurement Office, its Sustainability Manager or Environmental Agency or a collaborative Green Team may set priorities based on one or more of the following key factors:

### “Green” Impact

#### *Potential for Significant Environmental or Health Benefits*

Sometimes greening a specific contract can have such a positive impact on the environment and/or human health that it becomes obvious it should be accomplished as soon as possible. One potential example of this "low-hanging fruit" is adding ENERGY STAR requirements to bid solicitations for appliances and lighting equipment, which can yield substantial and measurable environmental benefits as well as cost savings.

#### *Product Category is High Usage/High Spend*

Contract usage reports can make obvious the commodities and services that are high volume or high dollar spend. These are often large statewide contracts that are used by multiple State agencies as well as State universities and colleges, municipalities, school districts, and other public entities in the state. Often, these contracts offer ripe opportunities for conversion to green alternatives because, in such high volumes, more sustainable options are likely to provide significant environmental benefits, buoyed by cost savings from volume discounts. Green conversion of high-spend product categories can be particularly effective when the purchases would help meet internal goals around cost savings or energy efficiency, because users across agencies are likely to make the green switch.

## Ease of Implementation

### *Timing During Re-Bid or Contract Extension*

One of the most important things the State Procurement Office or Green Purchasing Team can do each year to identify and prioritize green purchasing opportunities is to review a list of all of the Statewide (and other high-spend) contracts that are set to be re-bid over the next one to two years. The best opportunity for making substantial changes to a contract occurs when a contract is being completely re-bid. At that point, new specifications and bid evaluation procedures can be put in place to facilitate the addition of green products and services to the contract(s). It is important to identify these opportunities well in advance – even several months – to avoid holding up the contracting process. Allow ample time to discuss potential changes with end-users, to survey the market, and to develop bid specifications and bid evaluation procedures.

There are fewer opportunities to make substantial changes to contracts during contract extension procedures. Nevertheless, States do have some leverage to add green products and services to a contract while negotiating with existing vendors during bid extension. A decision about whether to extend an existing contract or go out to bid for a new contract (or set of contracts) can be based on whether the existing vendors offer a relatively wide array of green product alternatives at competitive prices, whether your end-users have been satisfied with those products and services, and whether your vendors are willing to make green improvements in exchange for a longer contract. Since contract extensions are voluntary, States can ask existing vendors to add green products to the core list (making them eligible for the vendor's highest discounts) or to the contract overall as a condition of contract extension. They can also ask them to eliminate particularly unsustainable products (such as incandescent light bulbs or non-recycled paper) from their product listing. States can also offer to extend their existing contract if the vendor is willing to do more to label or conduct training about their green products, provide periodic "green spend" reports, offer recycling services, etc. In any case, green products that appear on contracts available to users can be promoted through websites, newsletters or other internal communication vehicles, to ensure that contract users are aware of green purchasing opportunities on your State's contracts.

### *Available Cooperative Purchasing Opportunities or Existing Model Specifications*

Cooperative purchasing agreements, such as those that have been negotiated using a strict competitive-bidding process through Western States Contracting Alliance (WSCA), the National Joint Powers Alliance (NJPA), The Cooperative Purchasing Network (TCPN), US Communities, or another cooperative purchasing organization, increasingly offer green products on already-existing contracts available to State agencies. Cooperative purchasing can sometimes secure low prices through aggregated demand, and save purchasers' time on the bidding process. Alternatively, other States (or local governments) that have already greened a product category may have specifications to share that reflect green standards, as well as lessons learned from their bid solicitation and evaluation process.

### *An Easy or High-Profile Win*

Some green purchasing initiatives save money, are easy to implement, or address an environmental issue that has garnered news attention. Broad support for an effort will help it succeed. An initial high-profile "win" can jump-start support for the program overall and make subsequent green product choices easier.

### ***Third-Party Certifiers and Standards Help Identify Green Products***

Green products are much easier for purchasers to buy if credible, third-party certifiers have identified which items meet environmental standards and are regularly reviewed for compliance. In particular, multi-attribute certifications that judge a product based on several different factors relating to environmental performance are typically stronger and more reliable measures of “green” credentials, because they are based on a more complete assessment of a product’s overall environmental impacts, thereby preventing environmental and health tradeoffs. However, single-attribute certifications, adherence to standards, or approval lists from a credible organization or purchaser can also be helpful, indicating products and brands that consider the environment.

## **Meets Internal Needs**

### ***Coordinated with Sustainability Policy Drivers and Goals***

State legislation, federal laws, executive orders, or other policy directives may require or motivate a State to add green alternatives to its contracts.

Purchasing agents should look for specific green purchasing activities that can enable their states to meet their environmental policy goals. Another potent drive of green purchasing is green building certification. States seeking to get the daily operations of their facilities certified under the US Green Building Council’s LEED program (or other similar programs) may be looking for green products that qualify for prerequisites or additional credits.



### ***Meets Agency Needs***

A State agency may be particularly motivated to pursue a green alternative to a product they regularly use. For example, the Facilities Maintenance department might want its janitorial service companies to start using certified green cleaners to cut down on workplace chemical exposure. When requests are made, the Purchasing department may be asked to assist them in procuring these green products and/or services. Green products should be tested to ensure that they meet performance requirements for major users.

## **Appendix B:**

### **U.S. EPA Recycled-Content Standards**

The U.S. EPA maintains a list of minimum recycled-content standards that all federal agencies are required to use when purchasing products in the designated categories. Any recipient of federal appropriations is also required to use these standards as minimum specifications for any of the categories of products for which it spends over \$10,000 a year and uses at least some federal funds. This can include state and local government purchases as well as those of private sector contractors and other funding recipients.

Originally, the EPA standards were intended to apply only to federal agencies and others using appropriated federal funds. But manufacturers and other purchasers alike quickly adopted them as de facto national standards. Most States and many local governments have referenced these federal standards in their green purchasing legislation, executive orders, or guidance documents.

The result is that recycled-content products meeting at least the minimum range of the standards are usually widely available and cost-competitive. Purchasers can use these standards to specify recycled-content products and be relatively confident about receiving responsive bids. The standards also indicate upper ranges of recycled content commonly available, although EPA-compliant products may be more accessible in some regions than in others and may cost more.

#### **Product Categories Included in EPA Recycled-Content Standards**

**Construction Products** – building insulation, carpets, concrete and cement, paint, floor tiles, flowable fill, ramps, pipes, patio blocks, railroad surfaces, roofing materials, shower and restroom dividers, structural fiberboard

**Landscaping Products** – compost and fertilizer, garden and soaker hoses, hydraulic mulch, lawn and garden edging, plastic lumber

**Nonpaper Office Products** – binders, clipboards, file folders, portfolios and presentation folders, office furniture, office recycling containers and waste receptacles, plastic desktop accessories, plastic envelopes, plastic trash bags, printer ribbons, toner cartridges

**Paper and Paper Products** – commercial/industrial sanitary tissue products, newsprint, paperboard and packaging products, printing and writing paper, miscellaneous papers

**Park and Recreation Products** – park benches, picnic tables, plastic fencing, playground equipment, playground surfaces, running tracks

**Transportation Products** – channelizers, delineators, parking stops, traffic barricades, traffic cones

**Vehicular Products** – engine coolants, rebuilt vehicular parts, re-refined lubricating oils, retread tires

**Miscellaneous Products** – awards and plaques, bike racks, blasting grit, industrial drums, strapping, mats, pallets, signage, sorbents

## How To Accurately Read the EPA Recycled-Content Standards

Listed on the EPA's website for the [Comprehensive Procurement Guidelines](#) (CPG), each standard includes a range for *post-consumer* recycled material and *recovered* material, which includes post-industrial recycled material as well. The purpose for the range is to encourage agencies to go beyond the minimums and aim for high recycled contents. The minimum recommended recycled contents were intended to be a floor, but unfortunately manufacturers have often used them instead as recycled content "ceilings." Still, while the greatest variety of options in a product category is likely to be at the EPA minimum standard level, there often are higher recycled content options available, as well. This will become apparent from an Internet search and/or discussions with vendors to determine the range of contents most often available.

### **Example 1. Recycled-Content Copy Paper**

Listed on the EPA CPG website under Printing and Writing Papers as Reprographic Paper, its recommended standard is:

<i>Postconsumer Fiber (%):</i>	<i>Recovered Fiber (%):</i>
30	30

This means that the minimum standard for recycled-content copy paper is 30% postconsumer fiber. Postconsumer fiber is a subset of recovered fiber; so, when the recovered fiber percentage is the same, there is no additional recycled required to meet the minimum beyond the postconsumer percentage. However, while the most common content for recycled copy paper is 30%, there are many additional options at 50% and 100%, as well as some in between. The additional recycled content is sometimes postconsumer and sometimes preconsumer/post-industrial. As long as the 30% minimum postconsumer content is met, both are environmentally preferable for additional fiber.

### **Example 2. Plastic Lumber Landscaping Timber and Posts**

Some products on the EPA CPG list require a minimum post-consumer level but a higher overall recovered (recycled) content level. The EPA-recommended standard for plastic lumber timber and posts made from HDPE plastic is:

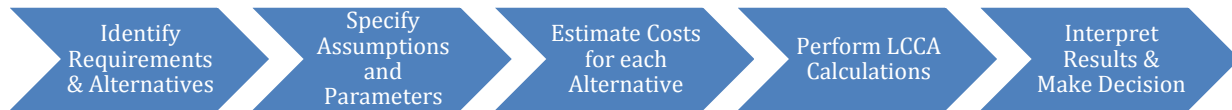
<i>Post-consumer Content (%):</i>	<i>Recovered Content (%):</i>
25-100	75-100

This standard indicates that at least 25% of the recycled product's total content must be post-consumer material (although there are many products with up to 100% postconsumer recycled content available on the market. In addition, the product must have at least another 50% recycled material, so that the total recycled (or recovered) content equals at least 75%. This additional recycled content can be postconsumer, preconsumer or a combination.

# Appendix C

## Life-Cycle Cost Analysis

### Steps to Conducting a Life-Cycle Cost Analysis (LCCA)



1. Identify requirements and feasible alternatives
2. Specify assumptions and parameters for conducting LCCA
3. Estimate costs for each alternative
4. Perform LCCA calculations for each alternative
5. Understand results to make procurement decision

#### ***Identify Requirements and Feasible Alternatives***

Before jumping in to performing LCCA calculations, a number of preliminary steps should be taken to ensure the LCCA is done efficiently and provides the best results. The first is estimating the level of effort to devote to performing the LCCA. If simply looking to compare a number of similar products, an LCCA can often be done relatively quickly or may not even be needed. Performing an LCCA on two dissimilar products that are functionally equivalent will be most beneficial, even though it will take more research to prepare comparable data.

From the beginning you will want to start documenting your LCCA. Proper documentation will make it easier to perform and help provide justification as to why a decision was made. Common items to document include:

- Alternative products or services being considered
- Parameters and assumptions used for the analysis
- Calculations
- Any interpretations of the results

When performing an LCCA, you will want to calculate the total life-cycle cost of one or more alternative products for comparison. Alternatives should not be eliminated due to costs until it is clear from an estimated calculation that the cost will not be feasible. Alternatives do not just have to be other products similar to the current one being used, but should consider other product types, use cases, or technologies when applicable.

#### ***Specify Assumptions and Parameters for Conducting an LCCA***

One of the most important parameters to set when conducting an LCCA is the time period over which to calculate the costs. The time horizon will generally be based on the type of products being evaluated. For example, the time horizon will likely be different for computers versus commercial appliances. It is often reasonable to set your time horizon as the longest life of the products you are

evaluating. However, the period of time that you use must be the same for all alternatives being evaluated.

There are other times and dates that are necessary for conducting a full LCCA analysis. The service date is when the product/project will be in service and operating costs will start to be incurred. This can be important if evaluating two alternatives where the length of time to put it in service will vary greatly.

### ***Estimate Costs for Each Alternative***

You are now ready to begin estimating costs for each alternative you plan to evaluate. There are several different costs you'll want to consider. For the purposes of this document and performing a simple LCCA, we'll only cover initial purchase costs, operating costs, replacement costs and end of life costs. If you were performing a full LCCA, you may also need to consider other costs, such as installation costs, labor and maintenance costs, residual value or resale price, taxes, finance charges, rebates, or other costs, which can impact the decision.

When deciding what costs should be estimated for the analysis, you should only consider those costs that are both relevant to the decision and significant in amount as to impact the result. Here are definitions used for the costs we will estimate:

**Initial cost** – The initial purchase price and any installation costs needed to put the product into service.

**Operating cost** – The cost to operate the product over its lifetime. This could include the costs for consumables (e.g., ink or toner replacement in a copier or multi-function device), energy, water or any ongoing maintenance.

**Replacement cost** – The cost to replace the product during the period of time of the analysis.

**End of life cost** – Any costs associated with disposing of the product.

The most difficult costs to estimate will be the operating costs. To compute the costs of consumables, determine their cost and expected frequency of replacement.

For computing energy or water costs, you'll first need to calculate the quantity of energy or water used by the product each year. This information can often be found on technical data sheets provided by the vendor. For energy, you may also need to know the type of fuel being used and, for water, there may be costs for water usage, heating and disposal into the sewer system. Next you'll want to find the local rates you expect to pay for the energy or water.

Also as part of operating costs, you'll want to consider if there are any other significant maintenance costs that will be needed during the product's useful life (for example, a car may need an oil change, or electrical equipment may need calibration).

### ***Performing LCCA Calculations for Each Alternative***

You are now ready to begin the total cost calculations for each alternative. The formula for total life-cycle cost is simply the sum of all costs over the time horizon:

$$C_{LCC} = C_{initial} + C_{operating} + C_{replacement} + C_{disposal}$$



### **Sample Case: Simplified LCCA**

To perform an LCCA, we will take all of the estimates we have and sum them up over the life of the product. For example:

$C_{\text{initial}}$  = Initial purchase price of \$20

$C_{\text{operating}}$  = Energy costs of \$15 per year

$C_{\text{replacement}}$  = Replacement cost of \$20 after five years

$C_{\text{disposal}}$  = Cost to recycle the product is \$2 at end of life

**Time Period** = 10 years

**Total Life-Cycle Cost** = \$20 + (\$15 x 10 years) + \$20 + (\$2 x 2 disposals) = \$194

In this example, notice that the product life will last exactly two times the time period we are analyzing. Because of this, we have one replacement cost at the halfway point and we incur two disposal costs.

Summing up the comparable costs for each alternative should make clear which one would actually be most cost-effective over the life of your ownership of the product.

### ***Understand Results to Make Procurement Decision***

In the previous section is an example of how to conduct an LCCA on a single product. When performing an LCCA, you will actually have to conduct the same analysis with the same parameters and assumptions across many different alternative products. It is important that the same method is used for evaluating all alternatives so that the results are comparable and an accurate decision can be made.

Upon evaluating all alternatives, you will have a total life-cycle cost for each alternative. In theory, your best option is always to choose the product with the lowest total cost of ownership. However, there are sometimes other factors, which may influence your procurement decision. For example, if one product has a high initial cost, there may not be enough money in the current budget to purchase it, even if it will have a lower life-cycle cost than alternatives. These situations will arise, but the organization is often best served by thinking of the long-term costs and effects of their purchasing decisions. One solution is to include both products on the contract so that end-users at least have the option of purchasing the product with the lower TCO whenever it is practical to do so.

## Appendix D: Reliable Certifications and Other Eco-labels for Environmental Product Categories

The following product categories have reliable certifications and other eco-labels that can aid purchasing agents in more easily identifying greener choices.

### Appliances

	<p><b><u>ENERGY STAR</u></b> ENERGY STAR® is a joint program of the U.S. Environmental Protection Agency and the U.S. Department of Energy helping consumers save money and protect the environment by choosing energy-efficient products and practices. ENERGY STAR has developed energy-efficient standards across dozens of categories, including various electronics, appliances, lighting equipment, and HVAC products. ENERGY STAR requires third-party laboratory testing of products to verify products conform to the standards. It also offers a <b><u>Most-efficient Designation</u></b> for products that are among the top-tier of efficiency in their class.</p>
	<p><b><u>ENERGY STAR Most Efficient</u></b> The ENERGY STAR Most Efficient 2013 designation “recognizes the most efficient products among those that qualify for the ENERGY STAR. These exceptional products represent the leading edge in energy efficient products this year.” This eco-label can be found on appliances such as clothes washers, refrigerators, boilers, furnaces, air conditioners, and fans.</p>
	<p><b><u>RoHS-Compliant</u></b> The Restriction of Hazardous Substances (RoHS) Directive is a regulation, which was adopted by the European Union in 2002 and strengthened in 2010, that restricts certain hazardous materials in electrical equipment (including appliances) sold in the EU marketplace. The restricted materials include highly toxic heavy metals (e.g., lead, cadmium, hexavalent chromium and mercury) and flame retardants (e.g., polybrominated diphenyl ethers and polybrominated biphenyls). Because of this Directive, many products manufactured in the United States – or imported into the US marketplace – are labeled RoHS-compliant. There is no official RoHS-compliant eco-label, although the EU does spot check product to prevent false claims.</p>



## Carpeting and Flooring

 <p>The logo features a blue circle with 'NSF' in white, surrounded by the text 'SUSTAINABILITY CERTIFIED' in a semi-circle. Below the circle are two green leaves. A small box below the logo reads 'Platinum Certified NSF/ANSI 140 Sustainable Carpet'.</p>	<p><b><u>NSF/ANSI 140 Certified</u></b>  NSF/ANSI Standard 140 is a certification system for carpets and rugs, which was developed by NSF International and The Carpet and Rug Institute. It is based on life-cycle environmental assessment principles that consider the manufacturing processes, chemicals and other materials use to make the products. The standard employs an easy-to-use point system with established performance requirements and quantifiable metrics in six key areas:</p> <ul style="list-style-type: none"> <li>• Public Health and Environment;</li> <li>• Energy and Energy Efficiency;</li> <li>• Bio-Based Content;</li> <li>• Recycled Content Materials or Environmentally Preferable Materials;</li> <li>• Manufacturing;</li> <li>• Reclamation and End of Life Management; and Innovation</li> </ul> <p>Certification is granted in one of three levels – Platinum, Gold or Silver – consistent with how many points are earned.</p>
 <p>The logo consists of a green stylized tree with a circular arrow around it, and the letters 'FSC' below.</p>	<p><b><u>FSC</u></b>  The Forest Stewardship Council (FSC) certification is a voluntary, market-based program that supports environmentally responsible forest management worldwide. FSC-certified forest products are verified from the forest of origin through the supply chain. The FSC label ensures that the forest products (including end-products such as wood flooring) used are from responsibly harvested and verified sources. FSC is the forest certification program regarded by most environmental organizations as having the most independent, rigorous and comprehensive criteria.</p>
 <p>The logo features a green globe with a leaf, and the text 'GREENGUARD' in large green letters, with 'Indoor Air Quality Certified' in smaller text below.</p>	<p><b><u>GREENGUARD</u></b>  The GREENGUARD Indoor Air Quality Certification Program verifies that products designed for use in office environments and other indoor spaces meet strict chemical emissions limits in order to create healthier interiors. GREENGUARD has two levels of product certifications: one for protecting indoor air quality generally and a more stringent certification for products that are recommended for Children and Schools. GREENGUARD is a single-attribute certification as it only evaluates products for their chemical emissions and no other environmental attributes that may be of significance. Therefore, it should be used only on its own for flooring products that don't have stronger multi-attribute certifications such as the NSF 140 (carpeting only).</p>

## Electronics and Electronic Products Recycling

	<p><b><u>EPEAT</u></b>  The Electronic Products Environmental Assessment Tool (EPEAT®) is a comprehensive environmental rating system that helps identify electronic products that meet a wide range of energy efficiency and other environmental criteria. The EPEAT system was conceived and developed through the collaboration of stakeholders from the business, advocacy, government and academic arenas. EPEAT’s website contains a searchable Registry that allows users to search by level (Gold, Silver or Bronze) and by individual criteria. Currently EPEAT covers only desktop and laptop computers and monitors, however, an EPEAT rating system is expected be in place for imaging equipment and televisions by 2013.</p>
	<p><b><u>ENERGY STAR</u></b>  ENERGY STAR® is a joint program of the U.S. Environmental Protection Agency and the U.S. Department of Energy helping consumers save money and protect the environment through energy efficient products and practices. ENERGY STAR has developed energy efficient standards across dozens of categories, including various electronics, appliances, and HVAC products. ENERGY STAR requires third-party laboratory testing of products to verify products conform to the standards. ENERGY STAR also has a “Most Efficient” Label that identifies products that are in the very top tier in their class.</p>
	<p><b><u>e-Stewards</u></b>  The e-Stewards Initiative is a project of the non-profit Basel Action Network (BAN). The e-Stewards certification program for electronics recyclers is designed to provide market incentives that improve the entire recycling chain that is managing the toxic materials in computers and other electronic products. In addition, early efforts are underway to develop a program to qualify or certify companies who collect and transport electronics, in order to increase the total volumes of electronics managed globally in a responsible manner.</p>
	<p><b><u>R2 Solutions</u></b>  R2 Solutions (R2S) is a non-profit organization established to house the R2 Practices. Recognizing the need for a comprehensive certification program that captured the operational and environmental concerns of the electronics recycling industry, the EPA convened a multi-stakeholder process to develop the “Responsible Recycling practices for Use in Accredited Certifications Programs” (R2). The resulting R2 standard and certification program certify recyclers for their responsible recycling operations.</p>

## Food Service Ware

	<p><b><u>Biodegradable Products Institute</u></b></p> <p>The Biodegradable Products Institute (BPI) is a not-for-profit association of key individuals and groups from government, industry and academia. Through its compostable label program, BPI identifies products that meet standards for compostable materials that biodegrade in large composting facilities. BPI-certified products meet ASTM Standards D6400 or D6868 for compostable bioplastics. Equivalent certifications have been established in other countries and products bearing these ecolabels may end up in the US marketplace. These include DIN EN 13432, AS 4376, and ISO 17088.</p>
	<p><b><u>USDA Biobased Certified</u></b></p> <p>According to the US Department of Agriculture (USDA), the purpose of its BioPreferred® program is to promote the increased purchase and use of biobased products. By doing so, it aims to reduce petroleum consumption, increase the use of renewable resources, better manage the carbon cycle, and contribute to reducing adverse environmental and health impacts. The USDA sets standards for a wide variety of biobased products and certifies products such as food service ware that meet the minimum biobased content standards. <a href="#">Click here for a complete list of products by category.</a></p>





## Janitorial Cleaning Products

	<p><b><u>Green Seal</u></b></p> <p>Green Seal is a non-profit organization that helps develop life-cycle-based sustainability standards for products, services and companies and offers third-party certification for those that meet the criteria in the standard. Green Seal's standards for janitorial cleaning products include:</p> <ul style="list-style-type: none"> <li>• GS-34: Cleaning and Degreasing Agents</li> <li>• GS-37: Cleaning Products for Industrial a&amp; Institutional Use</li> <li>• GS-40: Floor Care Products for Industrial &amp; Institutional Use</li> <li>• GS-42: Commercial &amp; Institutional Cleaning Services</li> <li>• GS-53: Specialty Cleaning Products</li> </ul>
	<p><b><u>EcoLogo/UL Environment</u></b></p> <p>EcoLogo provides customers with assurance that the products and services bearing its logo meet stringent standards of environmental leadership. EcoLogo certifies environmentally preferable products in a large variety of categories.</p> <p>EcoLogo's standards for janitorial cleaning products include:</p> <ul style="list-style-type: none"> <li>• CCD-107: Odor Control Products</li> <li>• CCD-110: Cleaning and Degreasing Compounds: Biologically-based</li> <li>• CCD-146: Hard Surface Cleaners</li> </ul>
	<p><b><u>DfE</u></b></p> <p>The U.S. Environmental Protection Agency's Design for the Environment (DfE) Program screens the chemicals in cleaners and other products for human health and environmental risks. In addition, DfE allows products that have been determined to be effective and safer for human health and the environment to carry its label. As of January 2013, approximately 2,800 products have been "recognized" by the DfE program. These include general purpose and a wide variety of specialty cleaners. Products are listed separately for institutional and general consumers.</p>


## Paint and Coatings

	<p><b><u>Green Seal</u></b>  Green Seal is a non-profit organization that helps develop life-cycle-based sustainability standards for products, services and companies and offers third-party certification for those that meet the criteria in the standard.</p> <p>Green Seal standards for paints and coatings include:</p> <ul style="list-style-type: none"> <li>• GS-11: Paints and Coatings</li> <li>• GS-43: Recycled Content Latex Paint</li> <li>• GS-47: Stains and Finishes</li> </ul>
	<p><b><u>EcoLogo/UL Environment</u></b>  EcoLogo provides customers with assurance that the products and services bearing their logo meet stringent standards of environmental leadership. EcoLogo certifies environmentally preferable products in a large variety of categories.</p> <p>EcoLogo standards for paints and coatings include:</p> <ul style="list-style-type: none"> <li>• CCD-0047: Architectural Surface Coatings</li> <li>• CCD-048: Surface Coatings – Recycled, Water-Based</li> <li>• CCD-051: Paint and Varnish Remover</li> </ul>
	<p><b><u>GREENGUARD</u></b>  The GREENGUARD Indoor Air Quality Certification Program certifies that products designed for use in office environments and other indoor spaces meet strict chemical emissions limits, which can contribute to the creation of healthier interiors. GREENGUARD is considered a single-attribute certification as it only evaluates products for their chemical emissions and no other environmental attributes that may be of significance. Therefore, it should be used only for paints and coating products that don't have stronger multi-attribute certifications by Green Seal, EcoLogo, or the Master Painters Institute. GREENGUARD has two levels of product certifications: one for protecting indoor air quality generally and a more stringent certification for products that are recommended for Children and Schools.</p>

## Paper and Packaging

	<p><b>FSC</b></p> <p>The Forest Stewardship Council (FSC) certification is a voluntary, market-based program that supports environmentally responsible forest management worldwide. FSC-certified forest products are verified from the forest of origin through the supply chain. The FSC label ensures that products made from paper and wood (including office paper and packaging materials) are from responsibly harvested and verified sources. FSC is the forest sustainability certification program regarded by most environmental organizations as having the most independent, rigorous and comprehensive criteria.</p>
	<p><b>Chlorine-Free Products Association</b></p> <p>The Chlorine Free Products Association (CFPA) is an independent not-for-profit accreditation and standard setting organization focused on promoting practices free of chlorine chemistry. Two certifications are offered for products, Totally Chlorine Free (TCF) and Processed Chlorine Free (PCF).</p>
	<p><b>Green Seal</b></p> <p>Green Seal is a non-profit organization that helps develop life cycle-based sustainability standards for products, services and companies and offers third-party certification for those that meet the criteria in the standard.</p> <p>Standards for paper products include:</p> <ul style="list-style-type: none"> <li>• GS-01 Sanitary Paper Products</li> <li>• GS-07 Printing and Writing Paper</li> <li>• GS-09 Paper Towels and Napkins (now superseded by the third edition of GS-1)</li> <li>• GS-10 Coated Printing Paper</li> </ul>
	<p><b>EcoLogo</b></p> <p>EcoLogo provides customers with assurance that the products and services bearing the logo meet stringent standards of environmental leadership. EcoLogo, which is now under the UL Environment umbrella, certifies environmentally preferable products covering a large variety of categories. Currently, only a handful of paper products are certified by EcoLogo, although CCD-077 has been recently revised.</p> <p>Standards for paper products include:</p> <ul style="list-style-type: none"> <li>• CCD-075 Pulp</li> <li>• CCD-077 Paper</li> <li>• CCD-076 Paperboard</li> <li>• CCD-080 Envelopes</li> </ul>

## Plumbing and Irrigation Equipment

	<p><b>WaterSense</b></p> <p>WaterSense, a partnership program by the U.S. Environmental Protection Agency, seeks to protect the future of our nation's water supply by offering consumers a simple way to use less water by choosing water-efficient products. Products identified as WaterSense-certified means the products meet water efficiency standards and will generally consume less water than standard products. Certified products include faucets, toilets, flushing urinals, showerheads, and irrigation controllers. <i>Note: Most WaterSense products are designed to meet residential building codes, so they can usually be specified for small housing units but not large commercial buildings. For large commercial facilities, look for products that meet WaterSense criteria (e.g., toilets that use 1.28 gallons per flush).</i></p>
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# Appendix E: Vendor Sustainability Questionnaire

For firms providing goods and services

Please check and complete relevant items in this survey questionnaire

Return with Bid/Proposal

VENDOR NAME \_\_\_\_\_ Date \_\_\_\_\_

Website \_\_\_\_\_

Address \_\_\_\_\_

Contact Name \_\_\_\_\_ Title \_\_\_\_\_

Contact Phone \_\_\_\_\_ Email \_\_\_\_\_

Supply Category \_\_\_\_\_

**Please check off applicable items and provide supporting documentation, as appropriate.**

---

## Internal Operations and Policies

- 1. Has your company implemented any of the following environmental policy initiatives for your facilities? (Please attach relevant policies or links)
  - Environmental or Sustainability Policy
  - Climate Action Plan
  - Zero Waste Policy or Plan
  - Toxics Reduction Strategy or Policy
  - Water Reduction Strategy or Policy
  - Green Transportation Plan for employees
  - Sustainable Purchasing Policy - Please describe representative products bought for your facilities and list sustainability attributes - e.g., recycled materials, recyclable, reusable, non-toxic, biodegradable, EPEAT.



- 2. Does your company meet an environmental management standard (e.g., ISO 14001, EMAS)? (Please describe and document)  
\_\_\_\_\_
- 3. Does your company have an internal recycling/composting collection program? (Please describe)  
\_\_\_\_\_  
\_\_\_\_\_
- 4. Has your company received any environmental and/or sustainability awards in the past five years? (Please describe) \_\_\_\_\_
- 5. Is your company certified as a Green Business? (Please list certifying agency and provide documentation) \_\_\_\_\_
- 6. Does it hold other environmental certifications? (Please list and document) \_\_\_\_\_  
\_\_\_\_\_
- 7. Does your company require sustainability principles in managing its supply chain? (Please describe)  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
- 8. Has your company ever been cited for non-compliance of an environmental or safety issue (please describe date, reason, outcome)  
\_\_\_\_\_  
\_\_\_\_\_

## Facilities

- 1. Have any buildings that you own or lease been LEED certified by the U.S. Green Building Council?  
  
Describe: \_\_\_\_\_
- 2. Does your company create or purchase renewable energy in its operations?  
  
 On-site       Off-site       Holds Green-E certification  
  
 \_\_\_\_\_ Percentage of overall energy derived from renewable sources  
  
 (Please provide documentation)

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## Packaging

- 1. Does your company provide reusable shipping containers?
  - Always
  - On request
- 2. Do the shipping boxes used for order deliveries meet or exceed the U.S. EPA minimum of 25% postconsumer recycled content?
- 3. Does your company employ shipping-container take-back services or carton return? (Please describe) \_\_\_\_\_
- 4. Are the shipping containers and/or packaging used easily recyclable or compostable? (Please describe) \_\_\_\_\_

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## Shipping

- 1. Is your company an EPA SmartWay Partner or are products shipped via any EPA SmartWay Partners?
- 2. Are any of your company's passenger vehicles and light-duty trucks EPA SmartWay certified? \_\_\_\_\_ Percentage \_\_\_\_\_
- 3. Do your fleet vehicles utilize alternative fuels (e.g., Ethanol, E85, Biodiesel, Natural Gas)?
- 4. Does your company minimize shipping energy and environmental impacts in other ways? (Please describe)  
\_\_\_\_\_  
\_\_\_\_\_

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## Reporting

- 1. Does your company produce a public sustainability or environmental report about its policies and operations? Please provide a copy or link and indicate compliance with any international standards (e.g., Global Reporting Initiative, Carbon Disclosure Project, ISO 14000)  
\_\_\_\_\_  
\_\_\_\_\_

- 2. Does your company label environmental products, including listings in its catalog, website or brochures? If the products are generically labeled as "green," what criteria are used to determine which products qualify?

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- 3. Can you produce purchase reports for customers that identify and sort by the products' individual sustainability attributes (e.g., recycled, EPEAT, not just "green" designation)?

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### Vendor Services

- Does your company conduct trainings for contract users to help them transition to (and properly use) the green products it offers? (Please describe)

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- Does your company collect and recycle the products it offers at the end of their useful life? (If so, please describe the program and provide a reference.)

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- 
- 
- Other environmental achievements: Please specify:

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**Please complete the Product Details table on the next page.**

## Product Information and Supply Chain

- List each product individually (duplicate sheet as needed)
- Respond to applicable questions

Product Details		Product 1	Product 2	Product 3	Product 4	Product 5
Product Description						
Manufacturer						
SKU #						
Factory of Origin, Location						
Environmental Certifications (Please list and attach documentation)						
Life-Cycle Environmental Assessment? (Y/N, attach)						
Product Waste Reduction (Y/N, describe)						
Product Recycled Content	Post-consumer (0-100%)					
	Total Recycled (0-100%)					
Toxic Chemicals in product (Y/N, describe and include MSDS, if available)						

Product Details						
P	Reusable (Y/N)					
A	Take-back (Y/N)					
C	Total Recycled content (0-100%)					
K						
A	Postconsumer content (0-100%)					
G						
I	Certified Commercially Compostable (Y/N)					
N						
G						

## Appendix F: Green Purchasing Calculators

### Bottled Water

This calculator, developed by RPN, compares the cost and environmental impacts of 16.9 oz. bottles of water with tap water.

### Carbon Offset Calculators

These calculators can measure GHG emissions associated with various business practices.

### Cleaners Calculator

This calculator can quantify environmental benefits of using "green" cleaning products.

### Climate Protection Calculators

Use these calculators to estimate Greenhouse Gas (GHG) and other climate protection related emissions from various product categories.

### Computer Calculator

Use calculators from EPEAT and ENERGY STAR to measure the impact of computers.

### Food Services Calculators

Use these calculators to estimate costs and benefits of energy, water, service ware, and composting.

### Hybrid Calculator

Use the Hybrid Calculator to compare hybrid electric (HEV) and conventional vehicles.

### LED Calculators

These calculators can estimate cost savings of using LED traffic signals, street lights and exit signs.

### Lighting Calculators

Use calculators from ENERGY STAR and two CFL manufacturers to measure the impact of your institution's lighting in terms of cost savings and mercury content.

### Office Electronics Calculators

Use calculators from ENERGY STAR and EPEAT to measure the cost savings and energy use of your computer and imaging equipment.

### Paper Calculator

Measure the environmental benefits of switching to recycled content paper.



### Power Calculator

Use these tools to compile data on environmental impacts of electricity consumption.

### Toner Cartridges Calculator

Compare costs and wastes associated with remanufactured and OEM cartridges.

## Appendix G: Green Purchasing Resources

### States' Green Purchasing Best Practices Manuals

*Purchasing Guidelines for Selecting Environmentally Preferable Products, State of Maryland*

<http://www.dgs.maryland.gov/Procurement/Green/Guidelines/index.html>

*Guide to Recycled and Environmentally Preferable Products and Services on Massachusetts' Statewide Contracts*

<http://www.mass.gov/anf/docs/osd/epp/vol36-combined-sept-2012.pdf>

*Responsible Purchasing: A Resource Guide for Montana Employees*

<http://deq.mt.gov/Recycle/pdf/GreenGuideFINA.pdf>

### States' Green Purchasing Websites

*NASPO Green Purchasing Guide*

[http://www.naspo.org/content.cfm/id/green\\_guide](http://www.naspo.org/content.cfm/id/green_guide)

*Buying Green website, State of California*

<http://www.dgs.ca.gov/Default.aspx?alias=www.dgs.ca.gov/buyinggreen>

*DAS Procurement – Environmentally Preferred Procurement, State of Connecticut*

<http://das.ct.gov/cr1.aspx?page=132>

*Environmentally Preferable Products (EPP) Procurement Program, Commonwealth of Massachusetts*

<http://www.mass.gov/anf/budget-taxes-and-procurement/procurement-info-and-res/procurement-prog-and-serv/epp-procurement-prog/>

*Environmentally Preferable Purchasing (EPP), Minnesota Pollution Control Agency*

<http://www.pca.state.mn.us/index.php/topics/preventing-waste-and-pollution/environmentally-preferable-purchasing/environmentally-preferable-purchasing.html>

*Green Procurement, Commonwealth of Pennsylvania*

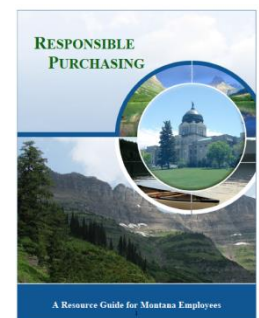
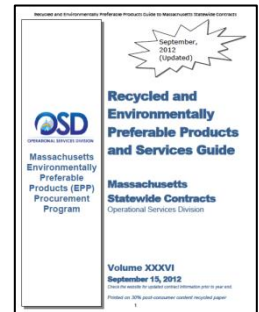
[http://www.portal.state.pa.us/portal/server.pt/community/green\\_procurement/5247](http://www.portal.state.pa.us/portal/server.pt/community/green_procurement/5247)

*Environmentally Preferable Purchasing, State of New York*

<http://www.ogs.state.ny.us/purchase/environmentpurchasing.asp>

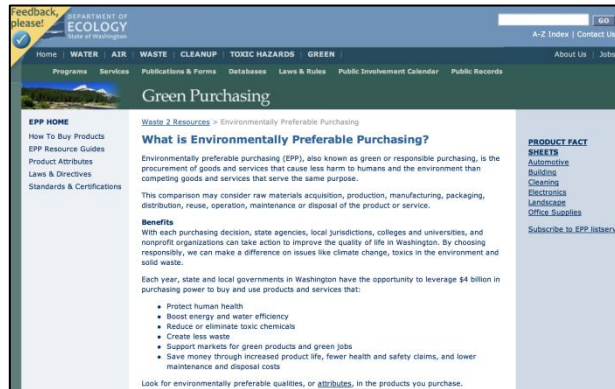
*Welcome to the Vermont Environmentally Preferable Purchasing Program*

<http://bgs.vermont.gov/purchasing/epp>



## Green Purchasing, State of Washington Department of Ecology

<http://www.ecy.wa.gov/programs/swfa/epp/>



## Other Green Purchasing Resources

### EPPNet

<http://www.nerc.org/eppnet/index.html>

### National Association of Counties' Green Purchasing Toolkit

<http://www.uscounties.org/GreenPurchasing/index.html>

### Responsible Purchasing Network (Responsible Purchasing Guides, webinars, policies, specifications, etc.)

<http://www.responsiblepurchasing.org>



### US Environmental Protection Agency's Database of Environmental Information for Products and Services

<http://www.epa.gov/epp/database.htm>