ENVIRONMENTAL PROTECTION AGENCY

[OPPTS–00149A; FRL–6095–4]

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Final Guidance on Environmentally Preferable Purchasing for Executive Agencies

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice.

SUMMARY: This document announces the availability of a general guidance designed to assist Executive agencies in identification and acquisition of environmentally preferable products and services. The final guidance is in response to section 503 of Executive Order 13101, entitled ''Greening the Government Through Waste Prevention, Recycling and Federal Acquisition'' (63 FR 49641, September 16, 1998), which requires EPA to issue guidance to address environmentally preferable purchasing by the Federal government. The guidance is designed to assist Executive agencies with the implementation of the environmentally preferable purchasing provisions of Executive Order 13101 and Section 23.704 of the Federal Acquisition Regulations. The implementation of this guidance will result in increased purchases by the Federal government of products and services which minimize harmful effects on human health and the environment.

FOR FURTHER INFORMATION CONTACT: For information contact: Eun-Sook Goidel, Office of Pollution Prevention and Toxics, Pollution Prevention Division, 7409, Environmental Protection Agency, 401 M St., SW., Washington, DC 20460, telephone: (202) 260–3296, fax: (202) 260–0178, e-mail: goidel.eunsook@epa.gov.

SUPPLEMENTARY INFORMATION:

I. Does this Apply to Me?

You may be potentially affected by this notice if you are an Executive agency employee responsible for the acquisition and use of products and services. Those who produce and sell products and services for use by the Federal government may also find the information in this notice to be of interest. If you have any questions regarding the applicability of this notice to a particular organization, consult the person listed in the ''FOR FURTHER INFORMATION CONTACT'' section.

II. How Can I Get Additional Information or Copies of this Document or Other Documents?

For the convenience of the reader, the final guidance is published below in its entirety in Unit VII.

1. *Electronically*. You may also obtain electronic copies of this document and various support documents from the EPA Internet Home Page at http://www.epa.gov/. On the Home Page select ''Laws and Regulations'' and then look up the entry for this document under the ''Federal Register--Environmental Documents.'' You can also go directly to the ''Federal Register'' listings at http://www.epa.gov/fedrgstr/. Alternatively, you can go to the Environmentally Preferable Purchasing program's website: http://www.epa.gov/opptintr/epp.

2. *In person*. The Agency has established an official record for this action under docket control number OPPTS–00149A. The official record consists of the documents specifically referenced in this action, any public comments received during an applicable comment period, and other information related to this action, including any information claimed as confidential business information (CBI). This official record includes the documents that are physically located in the docket, as well as the documents that are referenced in those documents. The public version of the official record does not include any information claimed as CBI. The public version of the official record, which includes printed, paper versions of any electronic comments submitted during an applicable comment period, is available for inspection in the TSCA Nonconfidential Information Center, North East Mall Rm. B–607, Waterside Mall, 401 M St., SW., Washington, DC. The Center is open from noon to 4 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Center is (202) 260–7099.

III. Introduction

On September 14, 1998, President Clinton signed Executive Order 13101, entitled ''Greening the Government through Waste Prevention, Recycling and Federal Acquisition.'' Section 503 of this Executive Order requires EPA to establish guidance to ''address environmentally preferable purchasing.''

The guidance that is being made available today is designed to help Executive agencies meet their obligations under Executive Order 13101 to identify and purchase environmentally preferable products and services. ''Environmentally preferable'' is defined in section 201 of the Executive Order to mean products or services that have a ''lesser or reduced effect on human health and the environment when compared with competing products or services that serve the same purpose.'' The guidance is intended to draw on the extensive procurement experience of the Executive agencies and on the environmental expertise of EPA and others both within and outside of the government. It provides a broad decision-making framework for environmentally preferable purchasing and is a first step to help Executive agencies systematically integrate environmental preferability into the Federal government's buying decisions.

IV. Background

This Final Guidance on Environmentally Preferable Purchasing is based on EPA's September 1995 Proposed Guidance on the Acquisition of Environmentally Preferable Products and Service and the comments received on that proposal. EPA announced the availability of and sought comment on the Proposed Guidance on the Acquisition of Environmentally Preferable Products and Service on September 29, 1995 (60 FR 50721) (FRL–4760–5). The process EPA used to develop the proposed guidance is described in that **Federal Register** notice. In addition, lessons and insights from early pilot projects have guided the development of the Final Guidance.

Since 1995, a variety of things have occurred that will directly affect the Federal government's environmentally preferable purchasing practices. Foremost are the 1997 revisions to the Federal Acquisition Regulations that incorporate policies for the acquisition of environmentally preferable and energy-efficient products and services. These changes require the consideration of environmental factors in all aspects of Federal acquisition, including acquisition planning (part 7), conducting market surveys (part 10), describing an agency's needs (part 11), evaluating and selecting a vendor (parts 14 and 15), and contract administration (part 42), as well as other provisions.

Another milestone is the 1996 enactment of the National Technology Transfer and Advancement Act of 1995 (NTTAA) which requires the Federal government to use consensus-based industry standards when available rather than creating a government-unique standard.

The acquisition streamlining reform initiatives have also brought many changes to the way the Federal government purchases products and

services. One example is increased decentralization of the purchasing decision, best exemplified by the meteoric increase in credit card use by Federal agency personnel. The number of card holders increased from 10,000 in 1989 to 250,000 in 1996 with the dollar volume increasing from $460,000 to close to $3 billion during the same time period. This trend highlights the importance of reaching out to those beyond the acquisition community with the environmentally preferable purchasing message.

Another trend is the increased interest at all levels of government--local, state and foreign--in using the government's purchasing power as a policy tool to drive environmental improvement. This trend will likely accelerate the anticipated spill-over effect of environmentally preferable purchasing practices. Beyond the governments' interest, other large institutional purchasers--non-profits and individual companies--are also beginning to include environmental factors in their buying decisions.

V. Lessions Learned

In the years since the Proposed Guidance was first issued, a number of pilot projects were initiated to demonstrate how EPA's Proposed Guidance could be applied to specific product categories. Though limited in number, these projects have provided important insights into the development of the Final Guidance as well as the direction of EPA's Environmentally Preferable Purchasing program.

First, it is important to have the participation of both the environmental and the acquisition/procurement personnel. The acquisition of environmentally preferable products and services in the Federal government context involves both defining what is environmentally preferable for a given product or service and ensuring that the procurement process encourages the purchases of these products. Innovative approaches that leverage the expertise of the environmental and procurement experts is essential to accomplishing these tasks and institutionalizing environmentally preferable purchasing practices.

Second, on a very positive note, early pilots have shown that vendors understand that providing a broad range of environmental information is an important part of doing business with the government and that it can serve as a competitive advantage. Generally speaking, however, information about environmental performance of products and services, particularly along the various life cycle stages, and easy-to-use tools to assess environmental performance remain scarce, limiting the wide-spread adoption of environmentally preferable purchasing. This is likely to change as Executive agencies begin to implement the changes to the Federal Acquisition Regulations and as agencies begin to use information and technical expertise of non-governmental entities.

Lastly, early pilots indicate that there is not a single, ''one size fits all,'' approach to incorporate environmental preferability into Federal acquisition. Using common sense, we need to tailor our approach and level of analysis to fit the complexity of the product and service categories being purchased.

Much progress has been made since Executive Order 12873 was issued in October 1993. A number of pilot projects have been implemented by key purchasing agencies that have provided valuable insights and lessons on ways to integrate environmental considerations into the Federal procurement process. These pilots have helped to identify gaps in information and tools. Future pilots will be instrumental in guiding both EPA's and other Executive agencies' efforts in environmentally preferable purchasing. As EPA and the other agencies move forward, the debate about the appropriate approaches and goals will likely continue. This is desirable given the dynamic nature of the issue. Based on feedback from all stakeholders, EPA will continue to test a variety of approaches and develop and refine tools to allow agencies to more readily apply the concepts of environmental preferability in government purchasing decisions.

VI. Major Changes to the Guidance

This section describes some of the key changes made to the 1995 Proposed Guidance. EPA has also prepared a more detailed Response to Comment document, which has been included in the public record for this guidance.

A. Guidance Framework

The Guidance framework remains largely unchanged and includes an introduction (Section I), intended audience (Section II), approach (Section III), a set of guiding principles (Section IV), suggested steps for Executive agency implementation (Section V), and appendices (Section VII). A new section, Section VI, lists available resources and tools related to environmentally preferable purchasing.

B. Guiding Principles

A number of changes have been made to the guiding principles, including the addition of a new principle and the merging of a number of principles. As a result, the Final Guidance now has five, rather than seven, guiding principles. Taken together, the principles are intended to provide a broad guide to help Executive agency purchasers address environmental preferability in acquisition of products and services. Specifically, the following changes have been made:

1. A new principle on product safety, price, environmental considerations, performance and availability has been added as Principle #1 and reads:

> Environmental considerations should become part of normal purchasing practice consistent with such traditional factors as product safety, price, performance, and availability.

This was in response to a number of comments requesting more emphasis be placed on the point that the addition of environment is not in lieu of traditional purchasing factors. Although the original proposal noted this, the addition of this new principle should send a clearer message on the importance of putting environmental considerations in the context of other purchasing factors.

2. The guiding principles on life cycle and multiple attributes have been collapsed into one principle (Principle #3) and reads:

> A product's or service's environmental preferability is a function of multiple attributes from a life cycle perspective.

This change is based on comments and also EPA's strong belief that the two concepts are integral in determining environmental preferability. The discussion that follows the guiding principle has also been modified to reflect that although the determination of environmental preferability should be based on multiple attributes, the purchasing decision may at times be based on a single attribute.

3. The guiding principles on impacts and local conditions have been modified and collapsed into one principle (Principle #4) and reads:

> Determining environmental preferability may involve comparing environmental impacts. In comparing environmental impacts, Federal agencies should consider: the reversibility and geographic scale of the environmental impacts, the degree of difference among competing products or services, and the overriding importance of protecting human health.

This change was made to remove the perceived conflict between the two original principles and to provide purchasers with more guidance on how to assess relative impacts. The original principles were intended to convey that, in general, global and irreversible

environmental impacts should be given greater weight in determining preferability than local and rapidly reversible environmental impacts. However, we also recognize that there may be situations in which there are unique mitigating circumstances locally, and in those cases, the purchaser can make the judgement that the local conditions and impacts should be given priority.

4. The principles on competition and product attribute have been revised and a new principle (Principle #5) on environmental information has been added. It reads:

> Comprehensive, accurate and meaningful information about the environmental performance of products or services is necessary in order to determine environmental preferability.

This revision was based on lessons from the pilots and reflects the importance of having relevant environmental information for determining environmental preferability. The discussion related to competition which originally appeared under guiding Principle #6 is now captured under guiding Principle #1.

C. Federal Agency Implementation

A number of changes have been made to facilitate Executive agency implementation of environmentally preferable purchasing, including:

1. EPA recommends that Executive agencies look to EPA's list of the top 20 prioritized product categories to focus their pilot projects. The description of this list is included in Section VI of the Final Guidance and the complete list is available on EPA's Environmentally Preferable Purchasing Program's website: www.epa.gov/opptintr. The prioritized list was developed pursuant to Section 503(a) of Executive Order 13101 which states that EPA's guidance ''should be. . .targeted towards products and services that have the most effect.''

2. In implementing pilot projects, EPA recommends, pursuant to section 503(b)(2) of Executive Order 13101, that agencies use all of the options available to determine environmentally preferable attributes of products and services in pilot projects, including the use of technical expertise of non-governmental entities such as labeling, certification, or standards developing organizations. Additional guidance on the use of these organizations is elaborated in the Office of Federal Environmental Executive and EPA's April 1998 policy letter. The full text of this policy letter has been added as Appendix E.

3. EPA recommends that agencies document their pilot efforts. In order to facilitate this, the Final Guidance includes a sample case study template (Appendix E).

D. Appendices

A number of changes have been made to this section, including:

1. The addition of three new items:

i. Sample Policy Directive (Appendix C).

ii. Full Text of April 1998 Policy Letter on Non-governmental Entities (Appendix D).

iii. Sample Case Study Template (Appendix E).

2. The deletion of the original Appendix D, ''A Summary of the Federal Trade Commission's Guides to the Use of Environmental Marketing Claims.'' The Guides were updated in May 1998 and the information on how to access the most recent Guides is now included in Section VI--Resources.

VII. Final Guidance on Environmentally Preferable Purchasing for Executive Agencies

For the convenience of the reader, the final guidance is published below in its entirety.

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Final Guidance on Environmentally Preferable Purchasing

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Guidance on Environmentally Preferable Purchasing

I. Introduction

On September 14, 1998, President Clinton signed Executive Order (EO)13101, entitled "Greening the Government through Waste Prevention, Recycling and Federal Acquisition." Executive Order 13101 (EO 13101) supersedes EO 12873, Federal Acquisition, Recycling and Waste Prevention, issued on October 20, 1993, but retains a similar requirement for the U.S. Environmental Protection Agency (EPA) to develop guidance to "address environmentally preferable purchasing." (Section 503, EO 13101) The Final Guidance that follows is based on EPA's September 1995 *Proposed Guidance on the Acquisition of Environmentally Preferable Products and Services* (60 FR 50721, September 29, 1995) and comments received on that Proposed Guidance as well as lessons learned from pilot projects conducted to date.

The Final Guidance below is designed to help Executive agencies meet their obligations under EO 13101 to identify and purchase environmentally preferable products and services. Section 503 (c) of EO 13101 directs Executive agencies to "use the principles and concepts in the EPA Guidance on Acquisition of Environmentally Preferable Products and Services, in addition to the lessons from the pilot and demonstration projects to the maximum extent practicable, in identifying and purchasing environmentally preferable products and services" and "modify their procurement programs as appropriate." Furthermore, Section 23.704 of the Federal Acquisition Regulation requires agencies to "affirmatively implement" the objective of "obtaining products and services considered to be environmentally preferable (based on EPA-issued guidance)."

"Environmentally preferable" is defined in Section 201 of EO 13101 to mean products or services that "have a lesser or reduced effect on human health and the environment when compared with competing products or services that serve the same purpose. This comparison may consider raw materials acquisition, production, manufacturing, packaging, distribution, reuse, operation, maintenance or disposal of the product or service."

Implementation of the Final Guidance will draw on the procurement experience of the Executive agencies and on the environmental expertise of EPA and other organizations both within and outside of the Federal government. This guidance provides a broad framework of issues to consider in environmentally preferable purchasing and will help Executive agencies systematically integrate environmental preferability principles into their buying decisions.

The guidance is <u>not</u>, however, a step-by-step, "how to" guide and it is not intended to answer many of the specific questions that might arise in the acquisition of a particular product category or service. The list of resources in Section VI provides more specific guidance and information about various product and service categories, environmental attributes that have been identified for them, and the approaches used to consider those attributes in acquisition decisions. For the latest information on other resources and tools under development, Executive agency personnel and others are directed to EPA's Environmentally Preferable Purchasing Program Web site at:<www.epa.gov/opptintr/epp>

The Final Guidance strives to meet the National Performance Review and procurement reform goals of simplifying and streamlining Federal purchasing while recognizing that the definition of "environmentally preferable" will likely require the consideration of different environmental factors as appropriate for different situations. In sum, the guidance:

- Applies to all acquisition types, from supplies and services to buildings and systems.
- Provides a set of guiding principles.
- Requests Executive agencies to select and implement pilot acquisitions or demonstration projects.
- Provides a framework for Executive agencies to implement the environmentally preferable purchasing provisions of EO13101.

II. Intended Audience for the Guidance

The target audience of this guidance includes all Executive agency employees involved in the acquisition of supplies, services, systems, and/or facilities. The general guidance and the information generated by the pilot projects also will be useful to Executive agency employees who request, maintain, or use the supplies, services, systems and facilities. In addition, both the general guidance and the pilot project information should provide pragmatic direction for private sector businesses who wish to manufacture, market, or provide environmentally preferable products and services for use by the Federal government.

III. Overall Approach for Implementing Executive Order 13101

Section 503 of EO 13101 has two key components: (1) development of this guidance; and (2) implementation of the guidance through pilot and demonstration projects. This guidance sets a broad policy framework for implementing environmentally preferable purchasing within the context of Federal government. For the second component, Section 503 (b) of the EO states "[A]gencies are encouraged to immediately test and evaluate the principles and concepts contained in the EPA's Guidance...through pilot projects...". These pilots may be undertaken using the in-house expertise of EPA and other Executive agencies, as well as the technical expertise of nongovernmental entities, including, but not limited to, voluntary consensus standards bodies (see§ 12(d) of the National Technology Transfer and Advancement Act (Pub. L. 104-113, §12(d), 15 U.S.C. 272 note), environmental standard setting organizations, third party certification programs, environmental labeling or environmental "report card" programs, and other environmental consulting organizations. Section V of this Final Guidance provides more detail about how these pilot projects might work. These pilots are expected to yield more specific and practical information about applying this Final Guidance to purchases of particular products and services.

In addition to promoting environmentally preferable purchasing, EO 13101 encourages Executive agencies to purchase bio-based products. (Section 504 (b)). Under the EO, "biobased product" means "a commercial or industrial product (other than food or feed) that utilizes biological products or renewable domestic agricultural (plant, animal and marine) or forestry materials."

Bio-based products may also be environmentally preferable. Made from renewable resources by definition, these products have many positive environmental aspects and should be considered by agencies looking to make environmentally preferable purchases. However, Federal purchasers should not assume all bio-based products are automatically environmentally preferable. As with other products, Executive agencies should consider a range of environmental impacts associated with bio-based products when making purchasing decisions. In some cases, factors such as pesticide use or high water consumption might make a bio-based product less environmentally preferable. The list of bio-based products which the U.S. Department of Agriculture will issue under Section 504 of EO 13101 will be a good starting point for Executive agencies looking to identify environmentally preferable purchasing. During the development of pilots under Section 503 (b) of the EO, EPA will look for opportunities involving bio-based products.

IV. Guiding Principles

EPA has developed five guiding principles to provide broad guidance for applying environmentally preferable purchasing in the Federal government setting. Applicability of these principles in specific acquisitions will vary depending on a variety of factors, such as: the type and complexity of the product or service being purchased; whether or not the product or service is commercially-available; the type of procurement method used (e.g., negotiated contract, sealed bid, etc.); the time frame for the requirement; and the dollar amount of the requirement.

In all acquisitions, Executive agency personnel use their professional judgement and common sense, whether assessing a product or service's performance, cost, or availability. Similarly, in applying these environmentally preferable principles Executive agency personnel should use reasonable discretion about the level of analysis needed to determine environmental preferability. For example, an extensive life cycle assessment might not be conducted to purchase rubber bands. On the other hand, for large-volume or systems acquisitions, or for complex products, such assessments may be appropriate, and might already be required. Or, in some cases, much of the information upon which to build such an analysis might have already been collected.

Guiding Principle 1: Environment + Price + Performance = Environmentally Preferable Purchasing

Environmental considerations should become part of normal purchasing practice, consistent with such traditional factors as product safety, price, performance, and availability.

The manufacture, use, and disposal of certain products might have adverse impacts on human health and the environment. These impacts impose costs that the purchasing entity, and ultimately, society as a whole, end up paying for in one way or another. For the Federal government, the hazardous or toxic nature of a product or service can result in significant cleanup or liability costs, as well as in less directly quantifiable, but cumulative and persistent environmental damage. Even non-hazardous waste is associated with ever-increasing disposal costs that can be avoided or reduced. Responsible management, beginning with the initial purchase of products and services that minimize environmental burdens, can diminish the Federal government's raw material, operating, maintenance, and disposal costs. In addition, a product or service's environmental preferability can often have positive impacts on its overall performance.

For these reasons, the Federal government's purchasing decisions are no longer confined to considerations of price and functional performance but should include considerations of environmental performance as well. Today agencies can obtain improved environmental attributes not at the expense of, but instead may operate in concert with, other traditional factors like price and functional performance. Those product or service providers who can optimize all these factors will capture and maintain the largest market-share of government customers.

Just like price, performance, and health and safety, environmental factors should be a subject of competition among vendors seeking government contracts. In turn, this increased competition among vendors should stimulate continuous environmental improvement and increase the availability of environmentally preferable products and services. The purpose of this guidance is to encourage Executive agencies to award contracts to companies that take environmental concerns into account. This process, consequently, will lead to the development of environmentally preferable products and services that perform better and cost less because they reduce waste and negative environmental impacts. As stated, this principle reflects the spirit of a number of reinvention initiatives at EPA and across the Federal government aimed at testing cleaner, cheaper, and smarter approaches to environmental protection.

Agencies have considerable discretion in incorporating environmental preferability into procurement decisions, especially within the context of "best value" contracting. For example, environmental considerations that result in payment of a price premium for goods or services may be reasonably related to an agency's definition of its "minimum needs" and, therefore, may be permissible. This is not much different than paying a higher price for better performance or quality. Federal personnel may consider paying a reasonable premium for environmentally preferable products on a number of grounds. For example, a reasonable price premium may be justified because the environmental attributes of a product or service provide offsetting reductions in operating and disposal costs.

Guiding Principle 2: Pollution Prevention

Consideration of environmental preferability should begin early in the acquisition process and be rooted in the ethic of pollution prevention, which strives to eliminate or reduce, up-front, potential risks to human health and the environment.

It is never too early in the acquisition process to begin considering environmental preferability. Pollution prevention, the reduction or elimination of waste at the source, can not only reduce pollution, but it can save money for agencies as well. Defense and civilian Federal agencies have ongoing programs for pollution prevention under EO 12856 and other authorities that can result in cost savings throughout the product or service life cycle. Furthermore, pollution prevention measures can lead to a higher degree of environmental protection by reducing subsequent costs for disposal or cleanup of hazardous wastes and materials. A key reason for environmentally preferable purchasing is to protect the environment by reducing waste and pollution at the source with the resulting benefit of reduced overall cost to the government and the public (taxpayers and society as a whole).

Under this guiding principle, pollution prevention should be the primary motivation and strategy for the Federal government's implementation of environmentally preferable purchasing. There are many ways to apply pollution prevention to the acquisition process:

a) Customized purchases or projects in which program managers, architects, engineers, systems designers, or others have input into the design phase afford agencies an early opportunity to apply environmentally preferable concepts. In addition, early involvement offers agencies a unique point of leverage from which to address environmental impacts. Although these types of purchases are not the bulk of Federal acquisition requirements, the early stage of customized product or project design is the time when decisions about different approaches, materials, and manufacturing processes are made. Estimates show that 70 percent or more of the costs associated with product development, manufacture, and use are determined during the initial design stages.[1] By incorporating environmental factors during product or service design, Federal agencies can minimize environmental problems and their associated costs. For example, early environmental consideration helps agencies avoid potential liabilities due to fines as well as the costs of record keeping and reporting.

b) During the early stages of acquisition, Executive agency personnel can also apply a systems analysis approach for certain products or services (such as computers, buildings, and transportation systems) in which a number of components have interdependent functions. A systems analysis approach takes into consideration the full set of product

[1]U.S. Congress, Office of Technology Assessment, Green products by Design: Choices for a Cleaner Environment, OTA-E-541 (Washington, D.C.:U.S. Government Printing Office, October, 1992)

elements, focusing on how they interact from a life cycle perspective and helping to identify the most efficient options for meeting the government's needs.

c) Executive agency personnel might also appropriately ask whether a product or a service is even necessary or can be replaced by a less damaging process. For instance, in degreasing operations, questions arise as to whether an efficient cleaner using halogenated solvents is better or worse for the environment than an aqueous-based cleaner. A more appropriate question may be whether the cleaning/degreasing step can be eliminated without affecting the overall performance of the product or system. This might be accomplished, for example, by consolidating cleaning and degreasing in a later stage of the manufacturing process or changing the process itself. As this example illustrates, environmental preferability does not just involve substituting a "green" product for another. It also involves questioning whether a function needs to be performed and how it can best be performed to minimize negative environmental impacts.

The Department of Defense integrates pollution prevention into all of its major weapons system acquisition programs. For example, the New Attack Submarine (NSSN) Program has worked to include environmental considerations in all phases of the submarine's life cycle, from initial design to eventual disposal some 30 or more years later.

By considering all viable environmental alternatives during the design phase, the NSSN Program identified a number of options that will result in benefits. Just a few examples are listed below:

- A redesigned nuclear reactor core will eliminate the need for refueling and disposal of spent nuclear fuel, while achieving a multi-million dollar cost avoidance.
- 31 percent reduction in the number of paints and coatings used in manufacturing the NSSN while ensuring that all of the selected paints satisfy applicable performance and environmental requirements.
- 61 percent reduction in the number of adhesive products to be used on the NSSN compared to the number required for previous submarine classes.
- 80 percent reduction in the number of solvents and cleaners.
- Research and development effort to identify and test a biodegradable hydraulic fluid for submarines to replace the current toxic mineral oil-based fluid.

By recognizing early on that the key to reducing environmental impact throughout the ship's life cycle is pollution prevention and hazardous material control and management, the NSSN Program was able to design a submarine that meets strict safety and performance requirements, achieves significant cost savings, and minimizes risk to the environment.

Guiding Principle 3: Life Cycle Perspective/Multiple Attributes

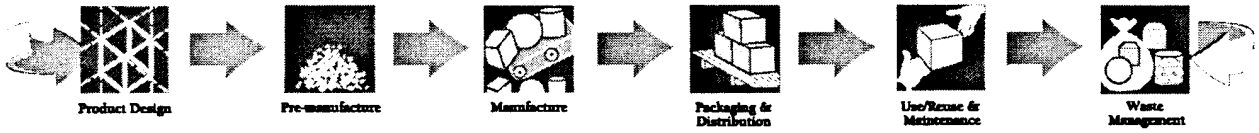
A product or service's environmental preferability is a function of multiple attributes from a life cycle perspective.

Federal agencies should consider the following concepts in applying this principle :

a) Life cycle perspective—A product or service has environmental impacts long before and after the Federal government purchases and uses it. The manufacture, use,

distribution, and disposal of products create a variety of burdens on the environment. Federal agencies should strive to purchase products or services with as few negative environmental impacts in as many life cycle stages as possible. In other words, Federal agencies should determine the "environmental preferability" of a product or service by comparing the severity of environmental damage it causes throughout its life cycle with that caused by competing products—from the point of raw materials acquisition, product manufacturing, packaging, and transportation to its use and ultimate disposal. By doing so, the Federal government can minimize the overall environmental impacts of products and services. In addition, by actively seeking and considering life cycle information to inform buying decisions, Executive agency personnel can send a clear signal that government business will go to those who consider the effect of their product's life cycle on the environment.

Life Cycle Stages of a Typical Product



Although most people would agree that considering life cycle impacts in purchasing decisions is desirable, there are disagreements on how to make purchasing decisions that best reflect a life cycle perspective. Even the term "life cycle" is interpreted differently by different people. To some, it connotes an exhaustive, extremely time-consuming, and very expensive analysis. To others, a life cycle perspective is possible in an abbreviated process, in which a long list of potential environmental attributes and/or impacts is narrowed to a few, allowing for comparison across a particular product category. In addition, the ability of Federal purchasers to make buying decisions from a life cycle perspective depends on a variety of factors including: the type of product or service being purchased; the availability of life cycle information and/or willingness by the provider to give the information; and the availability of easy-to-use tools that can translate this information to support purchasing decisions by the Federal government. EPA recognizes that agencies may find it easier to apply a life cycle perspective when the result will be internal agency environmental benefits and/or cost savings rather than external benefits. Nevertheless, EPA encourages agencies to consider reducing impacts along all stages of the product or service life cycle.

This guidance promotes the use of a range of practices, from life cycle considerations to a more rigorous, scientifically defensible life cycle assessment methodology. EPA encourages Executive agencies to use currently available tools as well as help refine and address the needs of Federal purchasers. Examples of available tools and references are

listed in Section VI. For the most current list of available tools, Executive agency personnel are referred to EPA's EPP Program Web site: <www.epa.gov/opptintr/epp>. EPA also encourages experts both within and outside of the Federal community to develop additional life cycle tools to support environmental preferability decisions.

b) Multiple environmental attributes — Environmental preferability should reflect the consideration of multiple environmental attributes such as increased energy efficiency, reduced toxicity, or reduced impacts on fragile ecosystems. In addition, these attributes should be considered from a life cycle perspective. Focusing on one environmental attribute of a product or a service, without considering others, might inadvertently exclude important impacts on the determination of environmental preferability. For example, improving one attribute (e.g., increased energy efficiency or reduced toxicity) may result in other unintended environmental life cycle impacts. It is also possible that focusing on a single aspect of the product or service will cause Executive agency personnel to overlook improvements that the vendor has or can make in other aspects of the product or service. In short, it is difficult to be confident that an alternative product is environmentally preferable without some consideration of multiple attributes from a life cycle perspective. Analytical tools such as life cycle assessment can help Federal agencies ensure the product or service they purchase does not create new problems for some other aspect of the environment by identifying other potential negative impacts that should be alleviated.

Although the determination of environmental preferability should be based on multiple environmental attributes, Federal agencies may at times make purchasing decisions based on a single attribute when that attribute distinguishes the product or service in a category. In its environmentally preferable purchasing effort, EPA aims to build upon those attributes that are well-defined, measurable and familiar to Federal purchasers (e.g., recycled content and energy efficiency). EPA also seeks to support the development of similar definitions and measures for other attributes that are less understood and to advance consideration of multiple environmental attributes in purchasing decisions.

The menu of environmental attributes described in Appendix B offers a preliminary look at what should be considered in environmentally preferable purchasing decisions. Many of the attributes are relevant to a number of different product life cycle stages, while others are more pertinent to one particular stage. The menu should serve as a means to inform Executive agency personnel about the different types of attributes that can make a product or service environmentally preferable. Each and every element in the menu is not meant to be applicable to all products and services nor is the menu all-inclusive

Guiding Principle 4: Comparison of Environmental Impacts

Determining environmental preferability might involve comparing environmental impacts. In comparing environmental impacts, Federal agencies should consider: the reversibility and geographic scale of the environmental impacts, the degree of difference

among competing products or services, and the overriding importance of protecting human health.

In determining environmental preferability, Executive agency personnel might need to compare the various environmental impacts among competing products or services. For example, would the reduced energy requirements of one product be more important than the water pollution reductions associated with the use of a competing product? The ideal option would be a product that optimized energy efficiency and minimized water pollution. When this is not possible, however, Executive agency personnel will have to choose between the two attributes. It is important to consider both the nature of the environmental impact and the degree of difference among competing products.

There is no widely accepted hierarchy that ranks the attributes or environmental impacts that are most important. The following three factors are intended to help Executive agency personnel analyze the environmental impacts of competing products and services and make decisions about environmental preferability when faced with trade-offs among environmental attributes. These factors are not listed in order of importance.

a) Recovery time and geographic scale—Federal agencies should consider recovery time and geographic scale in comparing environmental impacts. To what extent is an environmental impact reversible? An impact is less acceptable if the recovery time is longer.[2] The geographic scale of the problem and the importance of the affected ecosystems are also significant. Global environmental impacts are more significant, therefore, than ecological stressors that have a local or regional ecosystem impact.[3]

The table shown below provides a basic framework for considering the reversibility and geographical scale of environmental impacts and includes some examples of how certain impacts might fit into the matrix.

While some environmental standards or other sources of comparative information on products are national or international in scope, Federal agencies should also be prepared to consider unique local impacts and site-specific uses. Information based on an assessment of national or global needs, by its nature, rarely allows for the consideration of local impacts associated with how products are used,

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[2]This is based on the findings of the Science Advisory Board, published in its 1990 report entitled "Reducing Risk: Setting Priorities and Strategies for Environmental Protection," a statement of policy on priority pollutants affecting environmental and public health. In this report, environmental stressors were judged to be significant based on two primary criteria—the geographic scale and degree of reversibility of the impact.

The Science Advisory Board is a public advisory group providing extramural scientific information and advice to the Administrator and other officials of the Environmental Protection Agency. The Board is structured to provide balanced, expert assessment of scientific matters related to problems facing the Agency.

[3]Refer to above footnote.

recycled, and/or discarded. Executive agency personnel are encouraged to consider local factors, where they are relevant, and not rely exclusively on national or global information. For example, although it may be generally accepted that an aqueous-based degreaser is preferred over a halogenated solvent degreaser, the environmentally preferable purchasing decision may depend on whether there is sufficient local wastewater treatment capacity to deal with the aqueous waste.

There may be rare occasions where the goal of minimizing a local impact, such as smog, is in conflict with the goal of minimizing a global impact, such as ozone depletion and global climate change. In these instances, EPA encourages purchasers to engage as much as possible in applying Principle #2 and aiming to prevent pollution, thereby avoiding such trade-offs. Where there are unique local circumstances, the purchaser can make the judgment that the local conditions and impacts should be given priority.

ECOLOGICAL PRIORITY IMPACTS MATRIX

		Reversibility		
		Years	*Decades*	*Centuries/ Indefinite*
Geographic Scale	*Local/Regional*	* Erosion * Conventional Pollutants		
	National	*Hazardous Air Pollutants * Chemical Releases	* Bioaccumulative Pollutants	
	Global			* Loss of biodiversity * Ozone Depleting Chemicals * Global Warming Gases

++ This matrix provides a few examples of how certain environmental stressors and impacts might fall into the different categories of reversibility and geographic scale considerations and is not meant to be comprehensive.

b) Differences among competing products—In some situations, a purchaser may determine preferability by looking at the differences of environmental performance among competing products, rather than by comparing environmental problems. Guiding Principle 3 addresses the importance of identifying relevant attributes for a product. There might be significant differences among competing products for some of these attributes, while for others, the differences could be minimal. In purchase comparisons, Executive agencies might prefer the product or service that provides a significant improvement over competing products, without making a determination that one environmental problem is more significant than another. For example, a product that significantly reduces

toxicity might be preferable to one that makes a minimal reduction in waste reduction.

c) *Human health* -A product or a service should be at least equivalent to comparable products/services in protecting human health to be considered environmentally preferable. EPA's Science Advisory Board listed the environmental factors listed to the right as significant contributors to human health risks.

List of High Priority Human Health Stressors
(not in any order of importance):

Ambient air pollutants
Hazardous air pollutants
Indoor air pollution
Occupational exposure to chemicals
Bioaccumulative pollutants

EPA recognizes that Executive agencies considering these three factors (recovery time and geographic scale; differences among products; and human health) must rely on providers of products and services to supply practical environmental information on products. EPA encourages organizations that provide environmental standards or other types of comparative product information to consider these factors in evaluating and reporting environmental information for purchasers.

Guiding Principle 5: Environmental Performance Information

Comprehensive, accurate, and meaningful information about the environmental performance of products or services is necessary in order to determine environmental preferability.

a) Importance of Environmental Information — Executive agency personnel will need comprehensive, accurate and meaningful life cycle-based information about the environmental characteristics of products and services in order to evaluate whether one product or service is more or less damaging than another. Even with this thorough information, however, making these evaluations can be difficult. Yet, without such information, determinations of environmental preferability are even more challenging. Executive agency personnel are encouraged to seek, and product and service providers are encouraged to provide, life cycle-based information about the environmental performance of products and services. This information should be sought and provided in all appropriate stages of the acquisition process including, but not limited to market surveys, request for proposals, etc. (See Federal Acquisition Regulation, (FAR) 48 C.F.R. Subpart 23.7, which includes a mandate for the acquisition of environmentally preferable and energy-efficient products and services.

Executive agency purchasers may encourage product and service providers to describe their product or service's performance according to the menu of environmental attributes included in Appendix B (1).

Product and service providers' disclosure of environmental information about their products and services will also foster competition and encourage a market-driven approach to environmental improvement. The accessibility of the information to the public (both Executive agency personnel and the general public) will help ensure its accuracy and credibility.

b) What/How Information is Conveyed - A number of resources about the environmental performance of products or services are currently available. Two general categories of information sources can be distinguished: (1) manufacturers who provide environmental information (e.g., environmental claims, product profiles, etc.) about their products either on the label or through product literature, including advertisements; and (2) environmental information compiled, evaluated, and reported by non-governmental entities. Included in this second category are third-party certification programs that evaluate the environmental aspects of products and award symbols (e.g., "seals-of-approval") or compile "report cards" of environmental information. Non-governmental entities may also verify specific claims made by manufacturers (e.g., paper contains 30 percent recycled content).

Information conveyed through claims and seals can help Executive agency personnel identify environmentally preferable products, depending on the types of products being purchased and the legal acquisition requirements involved. A more detailed discussion of how Executive agencies can use technical expertise and research of non-governmental entities in their environmentally preferable purchasing practices is included in Section V and Appendix D. In evaluating the environmental attribute claims made by anyone, whether they are manufacturers, vendors, or other non-governmental entities, Executive agency personnel should refer to the Federal Trade Commission's (FTC's) *"Guides for the Use of Environmental Marketing Terms." (Green Guides.)*

V. Executive Agency Implementation

This section recommends steps that each agency can take to implement the environmentally preferable purchasing provisions of EO 13101.

A. Policy directive and affirmative procurement plans

Recognizing that effective implementation of environmentally preferable purchasing will require clear direction and support from the top levels of each agency, this Final Guidance recommends that each Executive agency issue a Policy Directive promoting the practice. A sample is included in Appendix C. The policy directive should include the elements listed below:

An overall statement of policy:

- Agency personnel should seek to reduce the environmental damages associated with their purchases by increasing their acquisition of environmentally preferable products and services to the extent feasible, consistent with price, performance, availability, and safety considerations.

- Environmental factors should be taken into account as early as possible in the acquisition planning and decision-making process. (See EO 13101, Section 401.)

- Responsibility for environmentally preferable purchasing should be shared among the program, acquisition, and procurement personnel.

A commitment to the following:

- Increasing the acquisition of environmentally preferable products and services. (See EO 13101, Sections 102, 503 (.c), and 602.)

  Under section 6002 of the Resource Conservation and Recovery Act of 1976 and FAR Subpart 23.4, procuring agencies are required to establish affirmative procurement programs for purchasing EPA-designated recycled products. EPA recommends that agencies expand the scope of their affirmative procurement programs to include environmentally preferable products and services. EO 13101, Section 302, (a)(1)(a) calls for a Strategic Plan to include the "direction and initiatives for acquisition of recycled and recyclable products and environmentally preferable products and services." Furthermore, Section 302 (b) (1) requires Agency Environmental Executives to "translate [this] Government-wide Strategic Plan into specific agency and service plans."

- Identifying and implementing pilot projects (See Section V (B) below).

- Establishing internal agency incentive and award programs to recognize those people, teams, and interagency work groups who are most successful at promoting the purchase of environmentally preferable purchasing (see Executive Order 13101, Section 802). Collaboration among agencies to provide education and training is highly encouraged.

In order to minimize the burden on Executive agencies, EPA recommends that each agency incorporate in its Policy Directive to promote environmentally preferable purchasing into its Affirmative Procurement and Strategic Plans. This incorporation can transpire as agencies revise their plans. Agencies should ensure that their Policy Directive is made available to the field-level procurement and environmental personnel.

B. Pilot Projects

Section 503 (b) of EO 13101 states "[A]gencies are encouraged to immediately test and evaluate the principles and concepts contained in the EPA's Guidance on the Acquisition of Environmentally Preferable Products and Services through pilot projects to provide practical information to the EPA for further updating of the guidance." Furthermore, Section 704 states "Each executive agency shall establish a model demonstration program. . . to demonstrate and test new and innovative approaches such as incorporating environmentally preferable...products...." into model facility programs. To help Executive agencies implement these provisions of the EO, this Final Guidance includes some suggested steps for initiating and implementing pilot acquisitions.

The suggestions that follow are based on lessons from early pilots undertaken by the General Services Administration and the Department of Defense in partnership with EPA. Case studies from these and other pilot projects are available from the Pollution Prevention Information Clearinghouse (202 260-1023) or they can be accessed through EPA's EPP Program Web site <www.epa.gov/opptintr/epp>.

Additional pilot acquisitions will be important testing grounds for applying the guiding principles and testing their applicability. The pilots will also provide valuable information for the development of tools and resources to facilitate widespread adoption of environmentally preferable purchasing practices.

EPA will track pilots that are planned or already underway on the EPP Web site, providing a clearinghouse for information on government-wide activities related to environmentally preferable purchasing. (See EO 13101, Section 503 (b)(4).) EPA will disseminate information about different pilots among the agencies through the EPP Web site, updates, and fact sheets to ensure that lessons learned are shared and used to inform other pilot projects.

The discussion below further describes how these pilots and demonstration projects might proceed. EPA encourages Executive agencies to undertake pilots and use all existing sources of information and technical expertise to carry them out. EPA is committed to supporting these pilots and providing overall coordination and technical assistance, as resources allow.

1. Selection of pilots. Selection of pilot acquisitions is at the discretion of the individual Executive agencies. There are at least two options for how agencies can approach this selection process. First, an agency may want to identify an environmental problem that it wants or needs to address. Once the problem has been identified, the agency can develop a list of products and services that contribute to that specific environmental problem. Alternatively, an agency may start out with a product or service category for which it wants to find alternatives. In either case, criteria that agencies might wish to consider in selecting pilot acquisitions include:

- Potential for a reduction in risk to human health and the environment.

- Status on EPA's prioritized list. Pursuant to EO 13101, Section 503 (a), and in order to assist Executive agencies focus their efforts on minimizing serious environmental impacts, EPA has developed a prioritized list of the top 20 product categories. The complete list, along with a discussion of the methodology used in its development can be found in EPA's EPP Web site at <www.epa.gov/opptintr/epp>.

- Existence of less harmful product or service alternatives. Alternatives could vary anywhere along the product or services' life cycle, for example, different ways of manufacturing or disposing. Alternatives might also include different ways of getting the same result, even if it means acquiring a completely different type of product or service.

- Feasibility/degree of flexibility in the acquisition.

- Products or services that are widely used within the Federal government and are representative or typical of the procurement system. This maximizes the pilot's potential value to others by providing lessons about the effectiveness of the guidance and increasing the likelihood that the pilot could be replicated. (See EO 13101, Section 503 (b) (1).)

2. Implementation of pilot projects. In implementing the pilot projects, Executive agencies can look to the process and results of projects others have completed or develop a different approach for environmentally preferable purchasing. In undertaking the pilots, agencies are encouraged to:

- Ensure the participation of environmental and procurement experts.

- Use all of the options available to them to determine the environmentally preferable attributes of products and services in their pilot projects, including the technical expertise of non-governmental entities. This is pursuant to EO 13101, Section 503 (b) (2). More specific guidance on the use of non-governmental entities is included in Appendix D.

Once a product or service has been chosen, pilots typically involve:

a) Determining environmentally preferable products and services. This can be accomplished by Executive agencies:

    - Identifying product attributes that can serve as indicators of environmental preferability. Agencies can look to Appendix B for a menu of attributes. Selection of attributes should be tied to the most significant environmental problems or impacts.

- Collecting information from product and service providers. This may require the development of contract language to ensure that vendors provide environmental information.

  With the recent changes to the FAR and the trend toward best value contracting, agencies can now more easily consider environmental factors when making purchasing decisions. However, environmental information is often not provided by vendors. Thus, it may be necessary for Executive agency personnel to clearly request or require relevant environmental information from vendors in market surveys and proposals whenever appropriate.

- Evaluating the environmental information.

b) Incorporating results of the environmental information research into the acquisition process to purchase environmentally preferable products and services. While the acquisition strategy and method are determined by the purchasing agency, EPA asks that agencies select a strategy that:

- Maximizes the number of environmentally preferable product or service choices available to the purchasing agency.

- Promotes competition across products and services in terms of environmental performance.

- Stimulates product and service process innovation and continuous improvement.

- Allows for the consideration of local environmental conditions.

- Promotes a definition of environmentally preferable products and services that can improve over time.

c) Documenting the pilot effort, including a description of how the project was initiated and implemented and the lessons learned. A sample case study template is attached in Appendix E and is also available on EPA's EPP Web site. The results of pilot projects will be shared among Executive agencies through EPA's EPP Web site.

More specific information about pilot implementation will be made available through a variety of tools that EPA currently is developing including: an interactive training module; a "best practices guide" with examples of specific contract language that have been used by purchasing agencies; and a database of existing environmental standards that have been developed by governmental and non-governmental entities.

Section 12(d) of The National Technology Transfer and Advancement Act of 1995 (NTTAA) (Pub. L. 104-113, §12(d), 15 U.S.C. 272 note) and OMB Circular A-119 (63 FR 8546, February 19, 1998) direct Federal agencies to use both domestic and international voluntary consensus standards in lieu of government-unique standards in their procurement and regulatory activities, except where it would be inconsistent with applicable law or otherwise impractical. The Act's purpose is to reduce the cost of procurement and regulation by requiring a Federal agency to draw upon any suitable technical standard already used in commerce or industry rather than inventing a new standard. Some of those standards might relate to evaluating environmental performance and measuring the environmental attributes of products or services. In establishing Environmental Preferable Purchasing pilot projects or planning other environmentally-sensitive activities, agencies should first determine whether there is an applicable voluntary consensus standard that would meet its needs.

The NTTAA also requires a Federal agency, when it is consistent with the agency's mission, authorities, priorities, and budget resources, to participate in the standards-setting activities of voluntary consensus standards bodies. Such participation helps ensure the development of standards that meet the agency's needs, including those related to Environmental Preferable Purchasing concerns. This collaboration can also promote national goals and objectives. OMB Circular A-119 specifically mentions the need to promote the use of environmentally sound and energy-efficient materials, products, systems, services, or practices as well as the improvement of public health and safety. (See OMB A-119, Section 7a.)

In the long run, institutionalizing the purchase of environmentally preferable products and services requires that Executive agencies continue their efforts after the pilot's are completed. Given that environmental information about products and services is still scarce, agencies should rely on all sources of information and technical expertise in making determinations about environmental preferability. To foster agencies continue acquisition of "green" products, EPA will coordinate the development and standardization of environmental information about potential product and service categories for future pilots. This effort will consist of identifying environmental performance characteristics and measurement methods and will involve technical experts both inside and outside the Federal government. Executive agencies should examine all information generated through these types of efforts. The agencies, and not the nongovernmental entities, must make all final determinations regarding environmental preferability.

The experience gained from Executive agency pilots will be key in determining the scope and nature of EPA's long-term activities to advance Federal environmentally preferable purchasing. The lessons learned and partnerships formed from these pilots will help establish a broader infrastructure to support this initiative. EPA might use existing mechanisms or help develop new resources such as guidance, networks, and databases in support of the Federal purchasing community— to build this infrastructure. The infrastructure will help bridge the gap between the environmental and procurement expertise within the Executive agencies.

All Executive agency personnel will have a role in creating a demand for environmentally preferable products and services. Thus, the infrastructure will also have to support the development of tools that are easy and convenient for general and diverse use.

In light of the evolving acquisition landscape and the dynamic nature of the marketplace, the infrastructure will have to be flexible. In the increased globalization of the economy and trends toward commercialization of the Federal marketplace, will also require agencies to coordinate this initiative with new international trade and standardization developments. Ultimately, the measure of this initiative's success will be in the increased availability and purchase of products and services that pose fewer adverse impacts on human health and the environment.

VI. List of Resources

This section includes a partial list of current resources that Executive agency personnel may find useful in implementing environmentally preferable purchasing. For a more complete and updated list, please refer to EPA's EPP Web site, described below.

A. EPA's EPP Program Web site: <www.epa.gov/opptintr/epp>

This comprehensive Web site serves as the main repository of information and resources related to environmentally preferable purchasing, including:

- Publications such as case studies, program updates and fact sheets.
- Interactive features designed to elicit information exchange such as topical discussion forums, a listing of upcoming events, a bulletin board for posting questions and comments and sharing users' experiences, as well as tools that have been helpful in implementing EPP.
- A list of top twenty prioritized product and service categories selected because they represent large volume federal procurements with environmental impacts, along with a description of the methodology used. The list is provided to assist Executive agencies in selecting pilots that will have the most effect.

The site will also include training modules, a collection of promising green contracting practices, and a database of existing environmental standards, specifications and contract language.

B. Federal Case Studies of Environmentally Preferable Purchasing

EPA has developed a number of documents that describe the results of EPP pilot projects, including:

- "*Cleaners Pilot Project Case Study*" documents a collaboration between the General Services Administration and the Environmental Protection Agency.

- *"Paving the Road to Success"* describes Department of Defense's efforts to "green" a parking lot repair and maintenance contract.

- *"Leading by Example"* documents how EPA incorporated environmental features into two new buildings, the Ronald Reagan Building and the Research Triangle Park office complex.

- *"Defending the Environment at the Department of Defense"* describes the addition of environmental factors in the maintenance of the Pentagon and other DOD facilities.

In addition, Executive agencies have either initiated or are contemplating a number of other pilot projects involving products such as degreasing agents, paints, adhesives and copier paper[4], and services such as conferencing. Examples of where environmental preferability was factored into purchasing decisions can be found under "How to Do EPP" as well as "EPP Resources" on EPA's EPP Web site.

C. Life Cycle-Based Resources

- *Building for Environmental and Economic Sustainability*

  A life cycle-based, decision-support software tool to assist users in balancing environmental and economic concerns among products. The tool generates relative scores for alternative products based on environmental and economic performance weights that individual users can set. Although originally designed for building materials and product comparisons, the tool will be expanded to include other materials. The disks can be obtained by contacting the Pollution Prevention Information Clearinghouse at 202 260–1023.

- *Federal Facility Pollution Prevention Project Analysis: A Primer for Applying Life Cycle and Total Cost Assessment Concepts*

[4] Under the Pulp and Paper Cluster Rule published in 1998, EPA's Air and Water Offices have created the Voluntary Advanced Technology Incentives Program in order to move the industry toward the minimum environmental impact "mill of the future." EPA also has proposed to add a procurement incentive in line with this goal in the near future. The purchase of recycled content, chlorine-free paper would be a way to advance several Administration initiatives, including the Technology Incentives Program, President Clinton's directive to purchase paper containing 30 percent post-consumer fiber and the President's directive to agencies to purchase environmentally preferable products and services. For those interested in EPA's views on recycling and chlorine content in copier paper, please see EPA's *Effluent Guidelines and Standards for Pulp, Paper, and Paperboard Category, Phase I*, promulgated on April 15, 1998. (See 40 CFR Parts 63, 261 & 430)

D. Agency Environmental Catalogs

The General Services Administration (GSA) and the Defense Logistics Agency (DLA) in the Department of Defense, the two major suppliers for the rest of the Federal government, publish product catalogs that highlight some environmental attributes. These catalogs are listed below:

- *Environmental Products Guide*
  Published by the GSA, this guide contains a list of over 3,000 products and services with environmental attributes, such as low volatile organic compound content, recycled content, energy-efficiency, etc. All products featured in the guide are available through the supply system of GSA's Federal Supply Service. The guide is available on MUFFIN (Multi-Use File for Interagency News).

- *Environmental Products Catalog*
  Published by the DLA, this catalog includes products that meet the requirements of EPA's Comprehensive Procurement Guidelines as well as products that help reduce hazardous waste or eliminate the use of ozone-depleting chemicals. Currently, the catalog does not have a systematic way of screening products for their environmental characteristics, so inclusion in the catalog does not necessarily connote an environmentally preferable product. A DLA pilot is underway to develop environmental standards for a category of products in the catalog. For more information, contact the Defense General Supply Center at 1 800 352-2852.

E. Federal Trade Commission's *Guides to the Use of Environmental Marketing Claims (Green Guides)*, 16 C.F.R. Part 260

The *Green Guides*, recently revised in May 1998, are intended to reduce consumer confusion and prevent false or misleading use of environmental terms in product advertising and labeling. The *Green Guides* indicate how the Federal Trade Commission will apply Section 5 of the Federal Trade Commission Act, which prohibits unfair or deceptive acts or practices, in environmental marketing claims. The Green Guides apply to all forms of product and service marketing to the public, including advertisements, labels, package inserts, promotional materials, and electronic media. The *Green Guides* can be accessed via FTC's Web site: <www.ftc.gov> (Select "Consumer Protection", then select "Environment", and then select "Guides"). For hard copies, contact FTC at 202 FTC-HELP (382-4357). For questions, contact Janice Podoll Frankle at 202 326-3022.

F. Office of Federal Environmental Executive's Web Site —<www.ofee.gov>

The Office of the Federal Environmental Executive (OFEE) maintains a comprehensive Web site. Updated frequently, it includes background information on OFEE's mission, history, and staff; resources for implementing EO 13101; best practices and success stories for environmental procurement, recycling, and waste prevention; federal agency compliance guidance; and posts information on current and upcoming conferences, activities, publications, and other relevant news. The site also showcases the *Closing the Circle Awards* recognizing outstanding performance towards "greening" the government. OFEE also manages an interactive forum (list serve) for the exchange of information on environmental purchasing, recycling, and waste prevention.

G. Other Resources and Tools

- "Greening" of the Federal Logistics Information System (FLIS)
  The Defense Logistics Agency is working through a multi-agency group to incorporate positive environmental attributes (such as recycled content, energy efficiency and water efficiency) into FLIS, is a database of more than 7 million supply items purchased by the Federal government. With the supply items tagged with environmental attributes, FLIS will provide Federal consumers with specific environmental information about the products they buy.

- There are a variety of other resources and tools that are currently available or under development to assist Executive agency personnel implement environmentally preferable purchasing practices. For the latest list of resources and tools, please check the EPP Web site <www.epa.gov/opptintr/epp>.

VII. Appendices

Appendix A Glossary of Terms

Appendix B Environmental Attributes
(1) Menu of Environmental Attributes
(2) Definitions for Terms on the Menu of Environmental Attributes

Appendix C Sample EPP Policy Directive

Appendix D Text of Office of Federal Environmental Executive and U.S. Environmental Protection Agency's April 1998 Policy Letter on Use of Non-Governmental Entities

Appendix E Pilot Project Case Study Template

Appendix A—Glossary of Terms

Acquisition - means the acquiring of products and services (including construction) by contract with appropriated funds by and for the use of the Federal government through purchase or lease, whether the supplies or services are already in existence or must be created, developed, demonstrated, and evaluated. Acquisition begins at the point when agency needs are established and includes the description of requirements to meet those needs, solicitation and selection of sources, award of contracts, contract financing, contract performance, contract administration, and those technical and management functions directly related to the process of fulfilling agency needs by contract. (EO 13101, Section 201)

Bio-based products - are defined as commercial or industrial products (other than food or feed) that utilize biological products or renewable, domestic, agricultural (e.g., plant, animal and marine), or forestry materials. (EO 13101, Section 201)

Environmentally preferable - products or services that have a lesser or reduced effect on human health and the environment when compared with competing products or services that serve the same purpose. The product or service comparison may consider raw materials acquisition, production, manufacturing, packaging, distribution, reuse, operation, maintenance, or disposal. (EO 13101, Section 201)

Life cycle assessment - means the comprehensive examination of a product's environmental and economic aspects and potential impacts throughout its lifetime, including raw material extraction, transportation, manufacturing, use, and disposal. (EO 13101, Section 201)

The International Standards Organization, through ISO 14040, has defined life cycle assessment slightly differently as follows: Compilation and evaluation of the inputs, outputs, and the potential environmental impacts of a product system throughout its life cycle.

Life cycle cost - means the amortized annual cost of a product, including capital costs, installation costs, operating costs, maintenance costs and disposal costs discounted over the lifetime of the product, according to OMB Circular A-94 and Executive Order 13101, Section 201. However, this definition does not include external costs (i.e., those not borne directly by the entity that owns and operates a product/service, such as environmental costs to society at large). For the purposes of this guidance, EPA encourages agencies to consider all internal and external costs associated with a product, process, or activity throughout its entire life cycle—from raw materials acquisition to manufacture, recycling and final disposal.

Non-governmental entities - within the context of this guidance, non-governmental entities include, but are not limited to, voluntary consensus standards bodies (see§ 12(d) of the National Technology Transfer and Advancement Act (Pub. L. 104-113, §12(d), 15 U.S.C. 272 note), environmental standard setting organizations, third party certification programs, environmental labeling or environmental "report card" programs and other environmental consulting organizations.

Pollution prevention - "source reduction," as defined under the Pollution Prevention Act of 1990 (42 U.S.C. § 13102), and other practices that reduce or eliminate the creation of pollutants through: increased efficiency in the use of raw materials, energy, water, or other resources; or protection of natural resources by conservation..

The Pollution Prevention Act defines **source reduction** to mean any practice that:

- Reduces the amount of any hazardous substance, pollutant, or contaminant entering any waste stream or otherwise released into the environment (including fugitive emissions) prior to recycling, treatment, or disposal

- Reduces the hazards to public health and the environment associated with the release of such substances, pollutants, or contaminants.

The term includes: equipment or technology modifications, process or procedure modifications, reformulation or redesign of products, substitution of raw materials, and improvements in housekeeping, maintenance, training, or inventory control.

Appendix B—Lists of Environmental Attributes

Below is a list of environmental attributes that can help Executive agencies assess the environmental performance of products and services. This list, viewed from a life cycle perspective can enable Executive agency purchasers to select the product or service that minimizes adverse environmental impact. Although, it is a preliminary list of the major sources of potential human health and environmental risk, this source should not be considered definitive. Definitions for each of the attributes follow the list. Agency personnel can use this list in two ways:

(1) To provide a framework for identifying the most important environmental attributes of products and services, and using that information in product or service comparisons.

(2) As a check list of environmental issues to consider when designing and acquiring systems or buildings.

Not all of the environmental attributes will apply to each product or service; indeed, in some cases, information on just a few key environmental attributes will enable Executive agency personnel to determine environmental preferability.

The list of environmental attributes suggests that Federal agency personnel can use two different approaches to soliciting information from providers of products and services. The first includes consideration of releases of pollutants that occur during the life-cycle of the product. In the research on product life-cycle assessments that have been conducted over the past several years, these releases are known as ``inventory" items. Alternatively, the risks (or risk surrogates) associated with various life-cycle stages of a product can be identified. This approach seeks to identify actual environmental impacts rather than solely environmental releases. When calculating risks, general population (both environmental and human) exposures and occupational exposures need to be considered. Executive agencies may consider using both risk and release data in their decisions to purchase environmentally preferable products and services.

If product and service providers use this list as a basis for making environmental marketing claims, the claims should conform to the FTC's *Guides for the Use of Environmental Marketing Claims (Green Guides)*, 16 C.F.R. Part 260). A copy of the *Green Guides* can be obtained through FTC's Web site <www.ftc.gov>. Any party making a claim (or an independent third party that is certifying a claim) concerning a product's environment attribute must, at the time the claim is made, possess and rely upon a reasonable basis for substantiating the claim (16 C.F.R.§ 260.5). A reasonable basis consists of competent and reliable evidence. In the context of environmental marketing claims, such substantiation will often require competent and reliable scientific evidence, defined as tests, analyses, research, studies, or other evidence based on the expertise of professionals in the relevant area, conducted and evaluated in an objective manner by persons qualified to do so, using procedures generally accepted in the profession to yield accurate and reliable results.

The *Green Guides* state that either an unqualified or inadequately qualified claim that a product is "environmentally preferable" implies to consumers that a product is generally environmentally superior to others. "Environmentally preferable" claims should be accompanied by language limiting the superiority claim to the particular attributes that can be substantiated. For example, *Green Guides* state that environmental seals-of-approval should be accompanied by information on product labels explaining the basis for the award.

Appendix B(1) — Menu of Environmental Attributes

Executive agency personnel are reminded that the attributes listed and defined below are not comprehensive. In addition, Executive agency personnel should note that not all of these attributes will be applicable to every product or service. Furthermore, different attributes may be applicable to each product or service life cycle stage being considered.

A. Natural Resources Use

- **Ecosystem impacts**, such as endangered species, wetlands loss, fragile ecosystems, erosion, animal welfare, etc.
- **Energy consumption**, which can serve as an indicator of acid rain, climate change potential, air pollution, and associated human health risks.
- **Water consumption** which can serve as an indicator of water quality impacts, risks to aquatic ecosystems, and degradation of drinking water resources.
- **Non-renewable resource consumption**, which can serve as an indicator of acid rain, climate change potential, air pollution, and associated human health risks and risks to endangered species and fragile ecosystems.
- **Renewable resource consumption**, which can serve as an indicator of loss of biodiversity and increased erosion. Although in many cases the use of renewable resources is considered environmentally preferable to use of nonrenewable resources, products made from renewable resources may also have negative environmental impacts (e.g., ethanol is derived from a renewable resource, yet its manufacture can lead to releases of VOCs).

B. Human Health and Ecological Stressors

- **Bioaccumulative pollutants**.
- **Ozone depleting chemical global warming gases.**
- **Chemical releases** (Toxics Release Inventory (TRI) list chemicals or others.)
- **Ambient air releases** (other than TRI, including volatile organic compounds and particular matter).
- **Indoor environmental releases** (consumer and occupational).
- **Conventional pollutants released to water.**
- **Hazardous waste.**

- **Non-hazardous solid waste** (e.g., municipal solid waste, large volume waste, surface impoundments).
- **Other stressors.**

C. Hazard Factors Associated With Materials

- **Human Health Hazards**:
  - — acute toxicity
  - — carcinogenicity
  - — developmental/reproductive toxicity
  - — immunotoxicity
  - — irritancy
  - — neurotoxicity
  - — sensitization
  - — corrosivity
  - — flammability
  - — reactivity
  - — other chronic toxicity

- **Ecological Hazards**:
  - — aquatic toxicity
  - — avian toxicity
  - — terrestrial species toxicity

D. Positive Attributes

The attributes listed below are viewed as positive because they either serve as proxies for minimizing natural resource use or avoiding waste and the associated environmental impacts identified in A, B, and C. These attributes also are linked to authorities and requirements in statutes or executive orders that encourage the Federal government to promote their use. "Recyclability" and "recycled content" are attributes encouraged under RCRA. There are executive orders that encourage Federal agencies acquire bio-based products, and to promote energy efficiency and water conservation. "Durability", "reusability", "take-back", and "reconditioned or remanufactured" are positive attributes that encourage source reduction. "Product disassembly potential" increases the potential for source reduction and recycling of product components. Agencies should note that the presence of these attributes alone does not automatically make a product or service environmentally preferable. When making purchasing

decisions, executive agencies should consider a range of environmental impacts associated with products from a life cycle perspective when making purchasing decisions.

- **Recycled content**
- **Recyclability**
- **Product disassembly potential**
- **Durability**
- **Reusability**
- **Reconditioned or remanufactured**
- **Take-back**
- **Bio-based**
- **Energy efficiency**
- **Water efficiency**
- **Other attributes with positive environmental effects**

Appendix B(2)—Definitions for Terms on the List of Environmental Attributes

A. Natural Resource Use

(1) **Ecosystem impacts**- adverse impacts on the ecosystem, for example, endangered species, wetlands loss, fragile ecosystems, erosion.

(2) **Energy consumption**- the total amount of energy consumed for product or service manufacture, use, and disposal. Different sources of energy are associated with different environmental impacts.

(3) **Water consumption**- refers to the water resources that are consumed or used, which can serve as an indicator of water quality impacts, risks to aquatic ecosystems, and degradation of drinking water resources.

(4) **Non-renewable resource consumption**- those resources consumed that are not renewable in 200 years (e.g., fossil fuels, minerals). This can serve as an indicator of acid rain, climate change potential, air pollution, and associated human health risks and risks to endangered species and fragile ecosystems.

(5) **Renewable resource consumption**: refers to a continuum of resources, from those that are renewable in under 200 years, such as timber-based products, which can serve as an indicator of biodiversity loss and increased erosion, to those which are renewable in less than 2 years, such as grain-based feed stocks.

B. Human Health and Ecological Stressors

(1) **Bioaccumulative pollutants**- those chemicals that bioconcentrate in the environment as described in the *Significant New Use Rule* for new chemicals. (40 CFR 721.3.)

(2) **Ozone depleting chemicals**- defined in the Protection of Stratospheric Ozone Final Rule. (58 FR 65018, December 10, 1993.)

(3) **Global warming gases**- listed in *Climate Change 1992, The Scientific Report on the IPCC Scientific Assessment.* (Table A 2.1.)

(4) **Chemical releases**- ambient releases of chemicals of concern such as those reported in the TRI of the Emergency Planning and Community Right-to-Know Act. The current list is reported in 40 CFR 372.65.

(5) **Ambient air pollutants**- pollutants for which ambient air quality standards have been developed. (40 CFR 50.4- 50.12.) These pollutants include nitrogen dioxide, sulfur dioxide, ozone precursors, particulate matter, carbon monoxide, and lead.

(6) **Indoor environmental releases**- releases to an indoor environment of potentially hazardous chemicals such as those reported in the TRI in both occupational and consumer settings.

(7) **Conventional pollutants**- defined in 40 CFR 401.16. These pollutants include biochemical oxygen demand, total suspended solids, fecal coliform, pH, and oil and grease.

(8) Hazardous waste- Quantity of Resource Conservation and Recovery Act (RCRA) hazardous waste as defined in 40 CFR 261.3.

(9) **Non-hazardous waste**- solid waste as defined in 40 CFR 261.3. Includes municipal solid waste, large volume waste (e.g., oil and gas, mining, etc.) and solids disposed of in surface impoundments.

(10) Other stressors- any other stressors associated with the product or service but not captured elsewhere.

C. Factors Associated With Materials

Human Health Hazards

(1) **Acute toxicity**- the potential of a chemical substance to cause adverse health effects from short-term exposure.

(2) **Carcinogenicity**- defined by EPA through a weight-of-evidence approach. (51 FR 33992, September 24, 1986 and 61 FR 17960, April 23, 1996.) When quantification is possible, slope factors or other measures such as LED10 can also be used to express carcinogenic potency.

(3) **Development/reproductive toxicity**- adverse effects on the developing organism that result from chemical exposure prior to conception (i.e., either parent), during prenatal development, or, postnatally, to the time of sexual maturation. (56 FR 63798, December 5, 1991.) Reproductive toxicity is any adverse effect on an organism's ability to reproduce. (61 FR 56274, October 31, 1996.)

(4) **Immunotoxicity**- any adverse effect on an organism's immune system that results from exposure to a chemical substance.

(5) **Irritancy**- defined according to the Occupational Safety and Health Administration (OSHA) Hazard Communication Standard (29 CFR part 1910.1200) or other standard scales such as EPA or Organization for Economic Cooperation and Development (OECD) Guidelines (EPA 712-C-98-196, August, 1998.)

(6) **Neurotoxicity**- any adverse change in the development, structure, or function of the central and peripheral nervous system following exposure to a chemical agent (59 FR 42272, August 17, 1994.)

(7) **Sensitization**- an immunologically mediated cutaneous reaction to a substance. EPA test methods for evaluating sensitization potential are found in 40 CFR part 798.4100.

(8) **Other chronic toxicity**- the potential of a chemical substance to cause an adverse effect on any organ or system following absorption and distribution to a site distant from the toxicant's entry point.

(9) **Corrosivity**- dermal corrosion is defined by EPA as the production of irreversible tissue damage in the skin following application of a test substance. Test methods for evaluating dermal corrosion can be found in the harmonized Office of Prevention, Pesticide and Toxic Substances (OPPTS) guidelines for acute dermal irritation. (OPPTS 870.2500.) These guidelines harmonize the TSCA, FIFRA and OECD requirements in this area. The OSHA HazCom Standard listed above for irritancy also explicitly or implicitly covers corrosivity, sensitization, neurotoxicity, and all other toxic endpoints.

(10) **Flammability**- defined by the OSHA HazCom Standard (29 CFR 1910.1200) and ignitability is defined in 40 CFR part 261.21.

(11) **Reactivity**- defined in 40 CFR 261.23.

Ecological Hazards

(1) **Aquatic toxicity**- the potential of a substance to have an adverse effect on aquatic species. Measurement methods for aquatic toxicity can be found in 40 CFR part 797, subpart B.

(2) **Avian toxicity**- the potential of a substance to have an adverse effect on avian species.

(3) **Terrestrial species toxicity**- the potential of a substance to have an adverse effect on terrestrial species, other than man.

D. Positive Attributes

The following attributes are generally viewed as positive because they either serve as proxies for minimizing natural resource use or avoiding waste and the associated environmental impacts identified in A, B and C. Agencies should note that the presence of these attributes alone do not automatically make a product or service environmentally preferable. Executive agencies should consider a range of environmental impacts associated with products from a life cycle perspective when making purchasing decisions.

(1) **Recycled content**: Materials that have been recovered from the solid waste stream, either during the manufacturing process (pre-consumer), or after consumer use (post-consumer) (see Federal Trade Commission Environmental Marketing Guides mentioned above for more detail). Executive agencies are required to purchase EPA-designated items with recycled content (40 C.F.R. Part 247). Purchasers may want to consider whether the material contains pre-consumer or post-consumer recycled content. Recycled content, under the Federal Trade Commission guides, includes recycled raw material, that would have otherwise been incinerated or land filled, as well as used, reconditioned and remanufactured components. For products that are only partially made of recycled material, a recycled claim should indicate the percentage, by weight, of recycled content in the finished product. Unless it is otherwise clear from the context of the sale, for products that contain used, reconditioned or remanufactured components, a recycled claim should make clear that such components are used, reconditioned or remanufactured. Manufacturer's scrap material that would have, in any case, been incorporated into the product does not qualify as recycled under the Federal Trade Commission's guides. Refer to 16 C.F.R. § 260.7(e).

(2) **Recyclability**: Refers to products or materials that can be collected, separated or otherwise recovered from the solid waste stream for reuse, or in the manufacture or assembly of another package or product, through an established recycling program. For products that are made of both recyclable and non-recyclable components, the recyclable claim should be adequately qualified to avoid consumer deception about which portions or components are recyclable. In addition, unless recycling collection programs for the product are available to a substantial majority of communities or consumers where the product is sold, claims of recyclability need to be qualified to indicate the limited of availability of recycling collection sites. A product that is made from recyclable material, but, due to its shape, size or some other attribute, is not accepted in recycling programs for such material, should not be marketed as recyclable. Refer to the FTC Environmental Marketing Guides, 16 C.F.R. § 260.7(d).

(3) **Product disassembly potential**: Refers to the ease with which a product can be disassembled for maintenance, parts replacement, or recycling.

(4) **Durability**: Refers to the expected lifetime of the product.

(5) **Reusability**: Refers to how many times a product may be reused. Since reusable products generally require more up-front costs than disposable products, they are often subjected to a cost/benefit analysis in order to determine the life cycle cost.

(6) **Reconditioned/Remanufactured**: Refers to the process of restoring used, durable products to meet original performance standards. Remanufacturing has many other names, including: rebuilding (automotive sector); retreading (tire remanufacturing); reconditioning; and refurbishing. Remanufacturing results in less waste and raw material and energy use.

(7) **Take-back**: Refers to the manufacturer or designee accepting a return of end-of-life product; who pays for the transportation of the product may be situation-specific.

(8) **Bio-based**: Refers to a commercial or industrial product (other than food or feed) that utilizes biological products or renewable, domestic, agricultural (plant, animal and marine), or forestry materials.

(9) **Energy efficiency**: Refers to products that meet or exceed the Department of Energy (DOE)/Federal Energy Management Program's product energy efficiency recommendations which identify the top 25 percent of energy efficiency for all similar products or that meet the energy efficiency criteria of the Environmental Protection Agency (EPA)/DOE Energy Star program.

(10) **Water efficiency**: Refers to any plumbing fixtures that meet or exceed the Department of Energy's Federal Energy Management Program recommended performance standards for flow rates.

(11) Other attributes: Refers to any other positive attributes that are associated with the product but are not listed here.

Appendix C—Sample Environmentally Preferable Purchasing Policy Directive

Environmentally Preferable Purchasing Policy

The purchase and use of products and services can have a profound impact on the environment. [NAME OF DEPARTMENT OR AGENCY] recognizes the positive impact that it can make on the environment through the purchasing decisions that its employees make. It is the intent of [NAME OF DEPARTMENT OR AGENCY] to integrate environmental considerations into every aspect of acquisition. Although the environment may not be the core of our professional mission, the integration of these factors will result in economic, health, and environmental gains that will further our goals.

Overall Statement of Policy

- Agency personnel should seek to reduce the environmental damages associated with their purchases by increasing their acquisition of environmentallypreferable products and services to the extent feasible, consistent with price, performance, availability, and safety considerations.
- Environmental factors should be taken into account as early as possible in the acquisition planning and decision-making process.
- Responsibility for environmentally preferable purchasing should be shared among the program, acquisition, and procurement personnel.
- Environmentally preferable purchasing represents one important component of this agency's commitment to pollution prevention.

[NAME OF DEPARTMENT OR AGENCY] is committed to the following:

- Increasing the acquisition of environmentally preferable products and services.
- Identifying and implementing pilot projects to test the best ways to incorporate environmental preferability into acquisition.
- Establishing incentive and award programs to recognize those people, teams, and interagency work groups who are most successful at promoting the purchase of environmentally preferable products.

Appendix D—Text of Office of Federal Environmental Executive and U.S. Environmental Protection Agency's April 1998 Policy Letter on Use of Non-Governmental Entities

Pilot Project Approach on Use of Non-Governmental Entities to Implement Section 503 of Executive Order 12873 on Federal Acquisition, Recycling, and Waste Prevention

Background:

Section 503(a) of Executive Order 12873 directs EPA to "issue guidance that recommends principles that Executive agencies should use in making determinations for the preference and purchase of environmentally preferable products." Section 503 (b) states that Executive agencies shall use EPA's guidance to "identify and purchase environmentally preferable products" and to "modify their procurement programs by reviewing and revising specifications, solicitation procedures, and policies as appropriate."

On September 28, 1995, EPA issued a proposed *Guidance on the Acquisition of Environmentally Preferable Products and Services* which includes a series of principles that are intended to guide Federal purchasers as they consider environmental preferability in their acquisition decisions. This proposed *Guidance* was the culmination of numerous discussions EPA had with staff from key purchasing agencies and departments as well as representatives from industry and environmental and other interested organizations.

In EPA's proposed *Guidance* (Supplementary Information - Section III (E)), EPA acknowledged the existence of non-governmental entities -- including, but not limited to, environmental standard setting organizations, third party certification programs, environmental labeling or environmental "report card" programs and other environmental consulting organizations -- to which Executive agencies, in appropriate circumstances, may refer for technical assistance[1] in meeting the Executive Order goals.

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[1] For example, Executive agencies might seek technical assistance from non-governmental entities to help Executive agencies:

(a) analyze life cycle and multiple environmental attributes;
(b) analyze basic environmental performance characteristics for specific categories of products/services;
(c) identify environmentally preferable product/service criteria for a given product category based on agencies' core environmental values; and
(d) identify products/services in a given category which meet agencies' predetermined set of environmental performance criteria.

Executive agencies are reminded that they must critically examine all information from non-governmental entities. The Executive agencies involved, and not the non-governmental entities, must make all final determinations regarding environmental preferability.

In this paper, EPA suggests a pilot project approach to test the utility of various means of using non-governmental entities to achieve environmentally preferable purchasing goals. This pilot project approach will be publicized through a *Notice of Availability* in the *Federal Register*. Ultimately the findings from the pilot project approach will provide practical information to EPA in the development of its final *Guidance.*

Spectrum of Approaches

First, it must be emphasized that Executive agencies may choose to implement EPA's proposed *Guidance* without technical assistance from non-governmental entities. A number of on-going environmentally preferable purchasing (EPP) pilot projects are relying successfully on the in-house environmental and procurement expertise of EPA and the partnering Executive agency (e.g., General Services Administration and the Department of Defense). Therefore, this **paper should in no way be interpreted as an EPA endorsement of a specific non-governmental entity, organization or program, nor should agencies feel obligated in any way to utilize the technical assistance of such entities.**

However, to the extent that the Agencies are interested in tapping the expertise that resides outside the Government, EPA concludes that Agencies, in carrying out existing mandates for environmentally preferable purchasing may use non-governmental entities in accordance with appropriate operating guidelines. Executive agencies should note that they must avoid favoring, without reasonable justification, one non-governmental entity over another. Executive agencies should also inform their personnel about the Federal Trade Commission's *Guides for the Use of Environmental Marketing Claims* which govern environmental claims made by anyone, including manufacturers or environmental labeling or "report card" programs.

Thus far, EPA has identified a number of different potential approaches for how Executive agencies could use the technical expertise of non-governmental entities in furthering their environmentally preferable purchasing goals. <u>All of the potential approaches described below require that the Executive agencies involved critically examine all information from non-governmental entities. The Executive agencies involved, and not the non-governmental entities, must make all final determinations regarding environmental preferability.</u>

This list of approaches is not comprehensive. Agencies are encouraged to bring to EPA's attention other potential approaches for using non-governmental entities. In utilizing an approach, agencies have considerable discretion in incorporating environmental preferability into procurement decisions. For example, environmental considerations that result in limiting competition or in the payment of a price premium for goods or services may be reasonably related to an agency's definition of its "minimum needs" and therefore permissible.

Approach 1: Use of Existing Information Developed by Non-governmental Entities

Executive agencies' personnel could use existing information developed by non-governmental entities regarding environmental preferability of products and services, along with other available information (such as product performance and price) in defining the requirements for procurements and making more informed procurement and acquisition decisions. For example, Agencies might consider undertaking pilot projects to test the utility of non-governmental entities in the following instances:

a) Executive agencies could examine and evaluate already existing environmental criteria or standards developed by non-governmental entities for products or product categories (as well as for services or service categories), along with other available information, to identify a range of environmental attributes which can inform the agencies' own determinations of environmental preferability. Those determinations of environmental preferability could then translate into agency requirements, or at the very least, important criteria in the evaluation and selection of competing vendors or manufacturers.

b) In buying commercial items off-the-shelf, Executive agencies could inform their personnel to take into consideration environmental information (e.g., environmental claims, product profiles, "report cards", or environmental seals along with accompanying explanation, etc.,) either displayed on the products or provided through product literature or other materials (e.g., newsletters) in making purchasing decisions. This environmental information could be provided by vendors or manufacturers or by non-governmental entities. Executive agency personnel should be cautioned to avoid making their purchasing decisions on broad claims of environmental superiority.[2]

c) At the request of vendors or manufacturers, an Executive agency could include in its catalogs or schedules symbols from non-governmental entities denoting certain environmental characteristics, provided that (1) these symbols are accompanied by additional information that specify the reasons why a product has been "tagged" with a

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[2]The following excerpt from FTC's *Guides for the Use of Environmental Marketing Claims* illustrates this point:

A product is advertised as "environmentally preferable." This claim is likely to convey to consumers that this product is environmentally superior to other products. If the manufacturer cannot substantiate this broad claim, the claim would be deceptive. The claim would not be deceptive if it were accompanied by clear and prominent qualifying language limiting the environmental superiority representation to the particular product attribute or attributes for which it could be substantiated, provided that no other deceptive implications were created by the context. (From FTC's *Guides*, (a) General Environmental Benefit Claims, Example 6)

symbol; (2) the catalogs or schedules clearly emphasize that Executive agency personnel are not required to purchase products or services that are tagged; and (3) procurement officials should not rely on the symbols to make purchasing decisions, but instead, are required to take into account the environmental information underlying the symbol for relevance to the procurement.[3] Agencies including such symbols in their schedules or catalogs should ensure that their employees receive appropriate guidance in utilizing this approach. Vendors or manufacturers who choose not to obtain a seal or other symbols denoting certain environmental characteristics from non-governmental entities may nevertheless also request that environmental information about their products be included in the agency's catalogs or schedules.

This option will be piloted on a limited basis so that it can be closely monitored to determine its effectiveness.

d) On its own initiative, an Executive agency could tag products or services in its catalogs or schedules with its own symbol which denotes environmental characteristics that the Executive agency, through its own determination, deems preferable. This symbol could be based on existing information (e.g., environmental claims, product profiles, "report cards", or environmental seals along with accompanying explanation, etc.) available from non-governmental entities or from vendors or manufacturers themselves. This symbol should be accompanied by specific information explaining the basis for "tagging" a product as well as the source of the information. Catalogs or schedules should emphasize that Executive agency personnel would not be required to purchase products or services which are tagged, but are requested to take into account the environmental information underlying the symbol for relevance to the procurement.

Approach 2: Use of Non-governmental Entities as Certifiers of Specific Claims

Executive agencies could require vendors or manufacturers to have specific, measurable and verifiable claims certified by qualified non-governmental entities. A product's percentage content of volatile organic compounds (VOCs), for example, would be considered measurable

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[3]The following excerpt from FTC's ***Guides for the Use of Environmental Marketing Claims*** provides an example of this point:

> *A product label contains an environmental seal, either in the form of a globe icon, or a globe icon with only the text "Earth Smart" around it. Either label is likely to convey to consumers that the product is environmentally superior to other products. If the manufacturer cannot substantiate this broad claim, the claim would be deceptive. The claims would not be deceptive if they were accompanied by clear and prominent qualifying language limiting the environmental superiority representation to the particular product attribute or attributes for which they could be substantiated, provided that no other deceptive implications were created by the context.* (From FTC's *Guides*, (a) General Environmental Benefit Claims, Example 5)

and verifiable. The rationale behind this approach is that credible certification by non-governmental entities (or actual evidence from vendors or manufacturers themselves) could increase the credibility of claims that may be displayed on products. Such certification, or a vendor's or a manufacturer's ability otherwise to prove particular claims of environmental preferability, could be a prerequisite for competitive consideration.

This approach assumes that (1) no particular non-governmental entity is favored (without reasonable justification) over any other non-governmental entity; and (2) vendors or manufacturers who choose not to be certified by non-governmental entities are provided the opportunity to present credible evidence that their products or services conform to established standards.

Approach 3: Use of Non-government Entities as "Consultants" under Advisory and Assistance Contracts

Pursuant to the competitive contracting process as set forth in the Federal Acquisition Regulation (FAR), non-governmental entities could provide consulting services to Executive agencies. Non-governmental entities may provide advice and recommendations about environmentally preferable purchasing, for example, through the identification of key environmental characteristics of product categories. Under this approach, Executive agencies would define environmental preferability with the assistance of a non-governmental entity on a procurement-by-procurement basis. As per FAR Subpart 9.5, Executive agencies must fully consider the potential for conflict of interest concerns where a non-governmental entity may be unable to render impartial advice or assistance because of private business or financial interests. Also, Executive agencies should make every effort to maximize competition in awarding these advisory and assistance contracts to avoid any exclusive or preferential relationship with any particular non-governmental entity. Finally, the environmental preferability standards developed under this approach could be used as a basis for defining the agency's "minimum needs" in particular procurements and for developing criteria for evaluating competing vendors.

EPA's Suggested Next Steps

One of the key tenets of EPA's proposed *Guidance* is to have Executive agencies undertake a series of pilot projects that can demonstrate the applicability and workability of the guiding principles as contained in EPA's proposed *Guidance*. The success of our efforts depends on learning from these pilot projects and sharing the results widely among the different Executive agencies. <u>It is in this spirit that EPA strongly encourages Executive agencies to enter into pilot projects that test the potential approaches for using non-governmental entities as described above</u>.

Moving forward with this non-governmental entities pilot approach is desirable for a number of reasons: 1) EPA can capture the lessons from the pilots and share them among the Executive agencies so that there is no duplication of effort; 2) we can determine where the use of expertise outside of the government is appropriate and useful and where it is not; and 3) the net effect of creating a market for such EPP services may encourage increased competition among existing and new organizations or programs that can support Federal procurement of environmentally preferable products and services. Ultimately, the results from this and other pilot project approaches will help Executive agencies identify the most effective and practical ways to achieve the goals of environmentally preferable purchasing.

EPA recognizes that any pilot project involving a non-governmental entity will initially raise practical questions such as which non-governmental entities are legitimate and are credible and which are not; is there a need to certify a certifier? While EPA is not currently able to offer an "approved" list of non-governmental programs best suited to assist the agencies, it is prepared to provide assistance to Executive agencies on an individual procurement-by-procurement basis. As an initial step, Agencies are directed to the list of questions for evaluating non-governmental entities contained in Section III, [E] Third Party Certification Programs of EPA's proposed *Guidance on the Acquisition of Environmentally Preferable Products and Services*. The list of questions is included as Appendix 1 of this letter.

Specifically, within the context of this non-governmental entity pilot project approach, EPA's Environmentally Preferable Purchasing Program in the Office of Pollution Prevention and Toxics, is prepared to:

1) assist Executive agencies in structuring a pilot project involving non-governmental entities, including providing support to assess the utility of non-governmental entities on an individual procurement-by-procurement basis;

2) seek out and identify non-governmental entities who have expertise in the area of environmentally preferable purchasing through a variety of means, such as, but not limited to, Federal Register notices or announcements in the Commerce Business Daily (CBD). To make such a task manageable, EPA will identify, with help and guidance from the agencies, a few product or service categories upon which to focus at first. If successful, further federal register notices or CBD announcements could be issued focusing on additional product or service categories;

3) assemble a list of product categories for which eco-labeling criteria and standards have been established, both domestically and internationally for agencies to consider in developing their own criteria for environmental preferability. If appropriate, EPA will assist in such evaluations; and

4) assist Executive agencies in structuring an environmentally preferable purchasing pilot project that does not involve non-governmental entities.

In turn, Executive agencies should consult with EPA when undertaking pilots which may raise environmental issues beyond their expertise (e.g., where a pilot involves consideration of the way a product is made).

Furthermore, Executive agencies who choose to undertake pilots under option 1(c) should consult with EPA in developing a written process or procedure for the role seals or symbols and the associated information would play in their pilots. For example, agencies should provide clear guidance which specifies the importance of considering the underlying criteria, not the seal or the symbol.

As EPA and Executive agencies embark on these activities, EPA will continue to explore a number of different ways that it can address issues which are raised within the pilot project context more definitively. Executive agencies will be kept informed of developments on these issues. Agencies should inform EPA of their efforts in environmentally preferable purchasing, whether such efforts involve non-governmental entities or not in order to share lessons learned among other agencies and to aid in the evaluation of the pilot projects. In this way, EPA can make EPP concepts more practical for use within the Federal acquisition context. To facilitate this, Agencies are requested to send the attached FAX BACK form. Pilot projects involving non-governmental entities will be evaluated over a period of the next three years. EPA will use the findings from that evaluation to inform the development of its final *Guidance*.

For further information and to inform EPA of pilot project efforts, please contact:

Eun-Sook Goidel, Program Manager, Environmentally Preferable Purchasing Program, Pollution Prevention Division, Office of Pollution Prevention and Toxics (202)260-3296; (202)260-0178 FAX; e-mail: goidel.eunsook@epamail.epa.gov

For legal issues associated with use of non-governmental entities in environmentally preferable purchasing, please contact:

Tali Zemel, Esq., Office of General Counsel (202)564-4708; e-mail: Zemel.Avital@epamail.epa.gov

Attachment 1. List of Questions for Evaluating Non-Governmental Entities[4]

Executive agencies should consider the following list of questions in evaluating non-governmental entities before using their expertise to further internal environmental preferable purchasing goals. Does the program have:

- an open, public process that involves key stakeholders (businesses, environmental, consumer groups, and states, etc.) in developing its criteria or standards?
- award criteria, assumptions, methods, and data used to evaluate the product or product categories that are transparent (i.e., they are publicly available, easily accessed, and understandable to the lay person)?
- a system of data verification and data quality?
- a peer review process (with representation of all stakeholders) for developing the standards or criteria?
- criteria that are developed based on a "systems" or life cycle approach (i.e., "cradle to grave")?
- an outreach program to educate the consumer, which includes clear communications to consumers that provide key information concerning environmental impacts associated with the product?
- an established goal of updating standards or criteria as technology and scientific knowledge advance?
- authority to inspect the certified product's facility to ensure compliance with the standards or criteria?
- testing protocols for the certified products that ensure testing is conducted by a credible institution?
- access to obtaining the seal by small-and medium-sized companies (e.g., the cost of the seal is not so high as to prevent access by smaller companies)?
- compliance with the Federal Trade Commission's (FTC) *Guides for the Use of Environmental Marketing Claims*?

[4]Excerpted from EPA's proposed *Guidance on the Acquisition of Environmentally Preferable Products and Services*.

FAX BACK FORM

PLEASE INFORM EPA ABOUT YOUR PILOT PROJECT INVOLVING THE USE OF NON-GOVERNMENTAL ENTITIES IN ENVIRONMENTALLY PREFERABLE PURCHASING!

Name:

Department/Agency:

Address:

Address:

Phone:

FAX

E-mail:

Type of Acquisition/Procurement:

(e.g., small purchase, credit card purchase, competitive bid, etc.)

Product/Service Category:

Name of Non-Governmental Entity:

Type of Non-Governmental Entity (check all that apply):

___ environmental standard setting organizations

___ third-party environmental certification programs

___ environmental labeling organizations

___ environmental report card organization

___ environmental consultants

___ other (please specify: _____)

Type of Information/Assistance Sought from Non-Governmental Entity:

___ general environmental information about a product/service category;

___ analyze life cycle and multiple environmental attributes

___ analyze basic environmental performance characteristics for specific categories of products/services

___ identify environmentally preferable product/service criteria for a given product category based on agencies' core environmental values

___ identify products/services in a given category that meet agencies' predetermined set of environmental performance criteria; and

___ other (please specify:_____)

Please FAX BACK to: Eun-Sook Goidel at U.S. EPA 202 260-0178.

Appendix E — EPP Case Study Template

Project Basics

- What does your agency/department/office do? Where is it based?
- What, if anything, is unique about your efforts to purchase environmentally preferable products and services?
- What were the motivating factors behind the project?
- What kinds of products and services are you purchasing with environmental attributes in mind? Do you focus on a particular group of products or services? If so, why?

Implementation

- How have you incorporated environmental attributes into the purchasing process? Did you alter the established procurement process in any way to accommodate environmentally preferable products?
- What obstacles did you encounter (if any) in incorporating environmental attributes into the purchasing process? How were these obstacles dealt with?
- Did you incorporate environmental attributes into procurement specifications, standards, or policies; requests for proposals; bid announcements; manufacturer certifications; etc.? (If so, please provide examples.)

Product and Service Evaluation

- How do you evaluate the products or services you purchase that have environmental attributes? Do you rely solely on information provided by vendors, or have you developed your own criteria or your own evaluation system?
- Do you consider more than one attribute when evaluating a certain product (e.g., considering both recycled-content and bleaching when purchasing paper products)? If so, how do you go about taking multiple attributes into consideration?
- Are products or services that meet your environmental attributes priced competitively with other comparable products or services? Do you have a price preference for products or services meeting your environmental criteria?

Vendor Reactions

- How do you inform vendors about your preference for products with environmental attributes?
- Were vendors already providing environmental information before you requested it?
- How did vendors react to your request for environmental attributes of their products?

Customer (End-User) Reactions

- Who has been most affected by the changes brought about by your efforts to purchase environmentally preferable products (i.e., procurement staff, other employees, contractors, citizens, end-users)? How have they been affected?
- Have you attempted to inform or educate your customers about products' environmental attributes? How?
- How have customers responded to the environmental information you provided? Are you keeping track of their responses?
- Have customers been pleased with the performance of environmentally preferable products (especially when compared to products that are not considered environmentally preferable)?

Project Results

- How are you tracking/measuring the success of your Environmental Preferable Purchasing efforts? Have you been able to quantify your success in terms of positive effects on the environment?
- Have any cost savings resulted from the purchase of environmentally preferable products? How were these calculated?
- Do you think your experience with purchasing environmentally preferable products could be valuable to others who purchase different products?
- What are your future plans regarding the purchase of environmentally preferable products? Do you expect to incorporate additional attributes or examine other product categories? What are some of the opportunities and challenges you foresee in expanding your Environmental Preferable Purchasing efforts?

List of Subjects

Environmental protection.

Dated: August 13, 1999.

Carol M. Browner,

Administrator.

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