4. Long-term success. The experience gained from the short- and medium-term pilots will be key to determining the scope and nature of EPA's long-term activities to advance Federal acquisition of environmentally preferable products and services. The lessons learned from these pilots as well as the partnerships formed during the pilots will help to establish a broader infrastructure to support this initiative. EPA may need to utilize existing or help develop new mechanisms—guidance, networks, data bases, etc.-in support of the Federal purchasing community to build this infrastructure. The infrastructure can serve to bridge the gap between the environmental and procurement expertise within the Executive agencies.

All Federal personnel will have a role in creating a demand for products and services that have fewer environmental burdens. Thus, the infrastructure will also have to support the development of tools that are easy and convenient for Federal personnel to use in selecting and purchasing environmentally preferable products.

Furthermore, in light of the evolving acquisition landscape and the dynamic nature of the marketplace, the infrastructure will have to be flexible in order to meet the changing needs of the acquisition community. Given the increased globalization of the economy and the trend towards commercialization of the Federal marketplace, another important consideration will be to coordinate this initiative with new interntional trade and standardization developments. Ultimately, the measure of success of this initiative will be in terms of increased availability and purchase of products and services that have fewer impacts on human health and the environment.

Appendix

The set of appendices that follows should be viewed by procuring officials and other government employees as separate but related "tools boxes" to be used in determining preferability. As with all tasks, the type and complexity of the tools should be appropriate to the magnitude and importance of the job. The EPA seeks comments on the appendices that follow:

Appendix A. Glossary of Terms Appendix B. Environmental

Performance Characteristics (1) Preliminary "Menu" of Environmental Performance Characteristics

(2) Definitions for Terms in the Menu of Environmental Performance Characteristics

Appendix C. Applying a Life-Cycle Perspective

Appendix D. Summary of FTC's "Guides for Use of Environmental Marketing Claims"

Appendix A. Glossary of Terms

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 comparison may consider raw materials acquisition, production, manufacturing, packaging, distribution, reuse, operation, maintenance, or disposal of the product or service.

Life-cycle assessment. The life-cycle assessment is a process or framework to evaluate the environmental burdens associated with a product, process, or activity by identifying and quantifying energy and material usage and environmental releases, to assess the impact of those energy and material uses and releases on the environment, and to evaluate and implement opportunities to effect environmental improvements. The assessment includes the entire life-cycle of the product, process, or activity, encompassing extracting and processing raw materials; manufacturing, transportation and distribution; use/re-use/ maintenance; recycling; and final disposal.

Often the terms life-cycle assessment and life-cycle analysis are used synonymously. The Executive Order uses the latter and provides a slightly different definition as follows: "Life-cycle analysis is a comprehensive examination of a product's environmental and economic effects throughout its lifetime including new material extraction, transportation, manufacturing, use and disposal.

Life-cycle cost. For the purposes of this guidance document, life-cycle cost is defined to mean all internal and external costs associated with a product, process, or activity throughout its entire life-cycle-from raw materials acquisition to manufacture to recycling/final disposal of waste materials. The term life-cycle cost has also been used by the Department of Defense to mean the amortized annual cost of a product, including capital costs, installation costs, operating costs, maintenance costs, and disposal costs discounted over the lifetime of a product. However, this second definition has traditionally not included environmental costs associated with systems and thus, the first definition is used in the guidance.

Multiple Award Schedule (MAS). MASs contain a number of product listings for which several vendors are available for a particular product. Purchasers obtain information from the vendors and determine from which vendor they want to buy.

Pollution prevention. Pollution prevention means "source reduction," as defined under the Pollution Prevention Act of 1990, 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 which:

 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; and
- —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.

Third party certification programs. Within the context of this guidance, this general term is used to include programs (either non-profit or for-profit, government-run, governmentrelated or independent) that verify or certify single attribute claims made by manufacturers or other programs that compile key environmental information into "report cards" (e.g., those compiled by the Scientific Certification Program). The term also encompasses a large category of both international and to a lesser extent, domestic programs that award "seals-of-approval" to those products that meet a specific set of environmental award criteria. Award criteria may reflect an analysis of environmental impacts, such as Canada's Environmental Choice's standards for reduced-pollution paint, or single categories, such as Japan's EcoMark seal awarded for the recycled content of paper. A seal is given only if a product meets the standards established by the program. Most of the major foreign environmental certification programs use a seal of approval approach. Active third party seal of approval programs include Germany's Blue Angel, Canada's Environmental Choice, Japan's EcoMark, Green Seal (U.S.), and the international Flipper Seal-of-Approval, among others.

Participation by manufacturers or vendors in the various programs is usually on a voluntary basis.

Appendix B. Environmental Performance Characteristics

The menu of environmental performance characteristics listed below is designed to help identify the attributes that can be targeted for improvement. This, together with the life cycle graphic which appears in Appendix C, can be used by Federal purchasers to help select that product or service that minimizes environmental impact. It is a preliminary list of the major potential sources of human health and environmental risk. Definitions for each of the characteristics follow the menu.

This menu can be used by agency personnel in two ways: (a) to provide a standard framework for focusing in on the most important environmental attributes of products, systems, and facilities, and determining which product is preferable based on those attributes, or (b) as a checklist of environmental issues to be considered when designing and acquiring systems or buildings. Not all of the environemental performance characteristics will apply to each product; indeed, in some cases, information on only a few key environmental