

USE OF LIFE CYCLE ASSESSMENTS IN ENVIRONMENTAL PROCUREMENT DECISIONS



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May, 2002

OVERVIEW



- What is Environmentally preferable purchasing (EPP)?
- EPP in the Federal government
- Life cycle assessment and life cycle perspectives in EPP decision-making
- Challenges
- Ways to overcome the challenges

\$250 BILLION: FEDERAL GOV'T PURCHASING POWER



A sampling of where the money goes...

- Federal, state, and local governments own over 600,000 commercial buildings with over 15 billion square feet of floor space.
- 93,000 Federal travelers are traveling on any given business day to 8,000 locations across the country for meetings.
 - This translates into 24 million room nights of hotel space in the US annually.
- The U.S. federal government represents roughly 7% of the global market share for computers
- In 1997, the Federal government purchased roughly 18.1 billion sheets of copier paper.
 - This represents 2% of the total US market!

PURCHASING AND THE ENVIRONMENT



- **Purchasing is a core function**
- **Purchasing transactions cover:**
 - Direct and indirect purchases
 - Products AND services
- **Traditionally, purchasing department has not been tapped to help improve the environment**

GREEN PROCUREMENT PROGRAMS

Green Procurement Program

Target Attribute(s)

Comprehensive Procurement Guideline

Recycled content

Energy Star

Energy efficiency

Biobased Program

Agricultural or forestry
materials content

EPP Program

Depends on product/service --
examples include:
All of the above plus
Less/Non toxic
Resource conserving
Recyclable
Durable/upgradable
Reduced packaging
Reduced effect on human
health and eco-systems

WHAT IS ENVIRONMENTALLY PREFERABLE PURCHASING (EPP)?

... a process to identify and purchase “products and services that have a lesser or reduced affect on human health and the environment when compared to competing products and services that serve the same purpose. This comparison may consider raw materials acquisition, production, manufacturing, packaging, distribution, reuse, operation, maintenance or disposal...”

Executive Order on Federal Acquisition, Recycling and Waste Prevention (October, 1993)

EPA'S FIVE GUIDING PRINCIPLES ON EPP



- 1: Environment + Price + Performance = Environmentally Preferable Purchasing
- 2: Pollution Prevention
- **3: Life Cycle Perspective/ Multiple Attributes**
- 4: Comparison of Environmental Impacts
- 5: Environmental Performance Information.

WHY CONSIDER LIFE CYCLE IMPACTS?



- Avoid shifting environmental burden from one media to another.
- Award environmental improvements made in both upstream and downstream stages of a product.

EPP IN PRACTICE



- Two components to putting EPP into practice:
 - 1) Define what constitutes a preferable product or a service
 - 2) Obtain the preferable product using the procurement system in place
- How life cycle considerations fit into these components vary.

AN EXAMPLE: PAPER PURCHASE DECISION



- Pilot project to apply life cycle considerations in purchasing paper among a number of Federal agencies
- Looked to existing life-cycle based information
 - Environmental Defense Fund's Paper Task Force Report
 - Domestic and international third party certification program standards
- Relied on extensive expertise within the government.

“DEFINING” PREFERABLE PAPER

- Came up with a laundry list of attributes.
- Narrowed list to those that would be evaluated for inclusion in a solicitation:
 - Recycled content
 - Bleaching process used
 - Recyclability
 - Recyclability of ream wrapper
 - Sustainable forestry practices
 - Non-tree fiber alternatives
 - Effluent-free mill

FITTING EPP CRITERIA INTO PROCUREMENT PROCESS



- Begin process of “translating” attributes into specifications.
 - Relied heavily on procurement experts
 - Reconcile different “language” used between environmental and procurement experts
- Final list of attributes in the solicitation
 - Recycled content
 - Repulpable ream wrapper
 - Type and % of chlorine substitution
 - Certified sustainably managed & harvested wood fiber

THE RESULTING PAPER CONTRACT



- Contract was structured to allow for:
 - 1) attributes with clear, known measures (“requirements” – i.e., pass or fail criteria) and
 - 2) attributes that were less “tested” or in the marketplace (“preferences” – i.e. extra credit)
- A point system developed to award vendors who were taking steps to become “greener”
- Best value contract mechanism chosen over lowest bid contract
- Challenges of evaluating the bids based on new elements in contract

USE OF LCA IN PROCUREMENTS: CHALLENGES



- Lack of publicly available product life cycle-based information
- Can be time-consuming & costly
- LCAs do not yield clear-cut answers (won't answer: paper vs. plastic?)
- Unclear how to fit results of LCAs into procurement decisions

OVERCOMING THE CHALLENGES: DO's & DON'Ts

- Don't reinvent the wheel!
 - Eco-labeling organizations offer some LC-based product info
 - Green Seal
 - Scientific Certification Systems
 - many European eco-labeling programs
 - Check out EPA's environmental database:
<www.epa.gov/oppt/epp/database>
 - Contains product standards developed by domestic and international organizations
 - some of these standards reflect LC
 - Also contains contract language and other good product-based information!

OVERCOMING THE CHALLENGES: DO's & DON'Ts

- Don't reinvent the wheel! (continued...)
 - Building for Environmental & Economic Sustainability (BEES)
 - LC decision support tool designed for building material selection
 - Contains 65 product categories; working to incorporate brand specific info through "BEES, Please"
 - Includes environmental and economic performance information.

OVERCOMING THE CHALLENGES: DO's & DON'Ts

- Do actively seek life cycle-based information from manufacturers
 - The more we ask, the more likely we'll fill the info gap
 - Rewards companies who are doing LC
 - Available tools to facilitate:
 - ASTM Standard E 2129, Standard Practice for Data Collection for Sustainability Assessment of Building Products
 - Sustainable Products Purchasing Coalition

OVERCOMING THE CHALLENGES: DO's & DON'Ts

- Do use common sense!
 - Don't do an LCA to buy a pencil! Do consider an LCA for complex product/systems purchase!
- Do consider life cycle impacts when information is limited or non-existent
 - by considering multi-media impacts
 - by asking, for example, will increased recycled content come at the expense of increased toxics?

OVERCOMING THE CHALLENGES: DO's & DON'Ts

- Do keep an eye out on a # of initiatives/projects:
 - Request for Information on Computers
 - based on LC impacts
 - will be used for government-wide solicitation
 - LC Impacts to Attributes project (US EPA)
 - will develop a methodology to translate LC impacts into specification-friendly product attributes
- What about life cycle considerations in services?
 - Next conference topic!

INFORMATION SOURCES

- EPA's Environmentally Preferable Purchasing Program www.epa.gov/oppt/epp
- BEES
www.bfrl.nist.gov/oe/bees.html.
- Pacific NW Pollution Prevention Resource Center
www.pprc.org
- EPA's LCAccess was created to promote the use of LCA to make more informed decisions.
www.epa.gov/ORD/NRMRL/lcaccess