

Environmentally Preferred Purchasing

Environmentally Preferred Purchasing (EPP) can be an effective approach to drive change by assigning an advantage in the purchasing process for products and services that meet a pre-determined set of "green" or "sustainable" attributes. Using this approach, brand owners, retailers and government regulations set the marketplace expectations and develop market demand for new technologies. It is up to manufacturers – and their suppliers such as The Dow Chemical Company (Dow) – to deliver products and services that meet the market demand, or risk being left behind.

Dow sees tremendous growth opportunities in an effective EPP approach that is science-based and considers the environmental and social life cycle of products and services, along with functional performance and price. Education along the entire value chain, and collaboration among a wide variety of stakeholders, will drive the development of a clear common standard to providing scientifically sound information about product life cycles so that comparisons can be made objectively by purchasers and consumers.

There is a strong link between the growing EPP desires of the marketplace and Dow's 2015 Sustainability Goals, in particular our Sustainable Chemistry goal. Dow supports the use of science and technology to find sustainable materials for today and to meet the needs of future generations. Many Dow products provide significant benefits during the use phase of the product's life cycle, which enhances the sustainability of these products. EPP is a key element of Dow's approach to Sustainable Chemistry. Here are some examples from Dow:

- Plastic packaging innovations result in using less material and provide improved performance.
 - <http://www.dow.com/commitments/studies/shipping.htm>
 - <http://www.dow.com/commitments/studies/film.htm>
- DOWFROST glycol-based heat transfer fluid helps Wal-Mart reduce emissions of chlorofluorocarbons and conserve energy
 - <http://www.dow.com/webapps/lit/litorder.asp?filepath=heattrans/pdfs/noreg/180->
- Dow is developing products from alternative raw material sources to meet marketplace needs, including epoxy products for such applications as windmill blades, polyethylene plastics for uses such as food packaging and polyurethane products that can be found in mattresses and seat cushions.
 - <http://www.dow.com/commitments/studies/glycerine.htm>
 - <http://www.dow.com/commitments/studies/sugar.htm>
 - <http://www.dow.com/commitments/studies/oil.htm>

Dow sees great potential in the following areas:

1. Developing and marketing materials to meet rising consumer demand for "green" or sustainable products. Dow is committed to meeting the needs of our customers.
2. As a key material solutions partner, work with our customers and their customers to better understand the impact of the product throughout its life cycle so they

can make better informed decisions. Dow is actively engaged in discussions with key retailers, who are active in this issue in the marketplace.

3. The application of science-based EPP definitions so that measurable environmental improvements can be delivered.
4. Work closely with our purchasing function to ensure we are integrating our EPP opportunities all the way from our own purchases through our full value chain.

Currently, EPP attributes tend to focus on recycle content, the use of raw materials derived from sources other than petroleum or mining, biodegradability, the absence of banned or restricted chemicals, compostability, “non-hazardous” materials, etc. The definition under California law¹ is similar to one adopted by the U. S. Environmental Protection Agency (EPA)² following the release of Executive Order 13101 in 1998.³ While these are all important considerations, there are other aspects such as water, greenhouse gases, energy use, etc. which are important to consider as well. Comparisons of relative environmental and human health impacts of the products being considered as a part of the purchasing equation are best made through the use of life cycle studies and the interaction of all the components in a system. EPP decisions should more fully consider the complete life cycle of a product so that benefits realized during the useful life of that product are considered as strongly as are raw material sources and end-of life disposal methods. EPP decisions also need to take into account appropriate scientific information about the life cycle of viable alternatives to the product.

Dow stands ready to participate in the development of the criteria for a science-based EPP program for California in its chemicals management program. A flexible, market-driven, performance-based approach would benefit the people, environment and economy of California.

¹ “Environmentally preferable purchasing means the procurement or acquisition of goods and services that have a lesser or reduced effect on human health and the environment when compared with competing goods or services that serve the same purpose. This comparison shall take into consideration, to the extent feasible, raw materials acquisition, production, manufacturing, packaging, distribution, reuse, operation, maintenance, disposal, energy efficiency, product performance, durability, safety, the needs of the purchaser, and cost.” California Public Contract Code, sections 12400-12404 (AB 498, Chan, Chapter 575, Statutes of 2002), <http://www.leginfo.ca.gov/cgi-bin/displaycode?section=pcc&group=12001-13000&file=12400-12404>

² U. S. EPA Environmentally Preferable Purchasing, EPP Terms, <http://www.epa.gov/oppt/epp/pubs/about/eppterm.htm>

³ Executive Order 13101, “Greening The Government Through Waste Prevention, Recycling, and Federal Acquisition,” 14 September 1998, <http://www.ofee.gov/eo/13101.htm>