

4 PURCHASING

PURCHASING INDICATORS

Table 4. Purchasing Indicators for Carnegie Mellon, FY 2004

Report Section	Indicator	Reason	FY 2004	Units
4.1	Is there a procurement mission statement that includes green criteria?	Indicates level of commitments and guidance procurement provides regarding green purchasing	Yes	yes/no
4.1	Number of hits on procurement website	Number of visitors who are interested in procurement information	No	hits/year
4.1	<i>Number of hits environmental purchasing guide receives on website</i>	<i>Number of visitors who use purchasing guidelines</i>	<i>FWD</i>	<i>yes/no</i>
4.1	Are packaging guidelines in existence?	Indicates commitment to reduced packaging	No	yes/no
4.1	<i>Does an environmental purchasing guide exist?</i>	<i>Indicates level of commitments and guidance procurement provides regarding green purchasing</i>	<i>FWD</i>	<i>yes/no</i>
4.1.1	Are there preferred supplier green requirements?	Indicates level of green purchasing required by the university	Some	yes/no
4.1.1	Number of preferred suppliers	Background information	85	quantity/yr
4.1.1	Number of preferred suppliers who satisfy green supplier criteria	Indicates number of suppliers who have been screened for environmental criteria	5	quantity/yr
4.1.2	Number of green contracts awarded with green provisions	Indicates to some extent the level of commitment to green contracting, as well as how CMU incorporates it into daily life.	5	# contracts
4.1.2	Total value of green contracts awarded	Indicates to some extent the level of commitment to green contracting, as well as how CMU incorporates it into daily life.	\$5M	\$
4.1.2	Number of suppliers with whom a reduced packaging level has been negotiated	Indicates to the level of commitment to green contracting, as well as how CMU is able to effortlessly incorporate it into daily life.	0	quantity/yr
4.1.2	<i>Number of "green suppliers" identified in oracle</i>	<i>Indicates number of suppliers who have been screened for environmental criteria</i>	<i>FWD</i>	<i>quantity/yr</i>
4.1.3	Paper: Annual Purchase quantity	A product that is easy to track and indicates environmental/green product commitment. Some reflection on the amount of paper used at Carnegie Mellon as well	11,440	cases/yr
4.1.3	Paper: % of purchased paper from recycled materials that exceeds the required level	Indicates change over time in paper use	90%	%

Environmental Indicators for Carnegie Mellon University: Baseline Assessment 2004

Report Section	Indicator	Reason	FY 2004	Units
4.1.3	Paper: recycled content range of bulk purchased paper	Indicates change over time in recycled content	30%	low% - high%
4.1.3	Amount of and recycled content of purchased paper towels	Indicates negotiated source and green product implementation	1,800/40% recycled	cases purchased/% recycled
4.1.3	Amount of and recycled content of purchased toilet paper	Indicates negotiated source and green product implementation	2,470/20% recycled	cases purchased/% recycled
4.1.3	<i>Number of computer/electronics purchased</i>	<i>Background information</i>	<i>FWD</i>	<i>quantity/yr</i>
4.1.3	<i>Number of computer/electronics purchased through preferred supplier</i>	<i>Indicates computers purchased with factory set energy settings, computers that can be returned, computers with ensured energy start status</i>	<i>FWD</i>	<i>quantity/yr</i>
4.1.3	<i>Top five departments (purchasing \$) for follow up interviews if necessary</i>	<i>Can be used for follow up questions if necessary</i>	<i>FWD</i>	
FMS items				
4.1.4	Total paint purchased and kept on hand	Background information		quantity/yr
4.1.4	Amount of low VOC/green paint purchased and kept on hand	Indicates commitment to using low chemical paints	0	quantity/yr
4.1.4	Total light bulbs purchased	Background information	17,349	quantity/yr
4.1.4	Number of efficient or green (low-mercury) light bulbs	Indicates commitment to energy reduction through light bulb efficiency	7,003	quantity/yr
4.1.4	Number of clear plastic bags purchased	Indicates number of clear plastic bags used by FMS	11,105	#/yr
4.1.4	Number of black plastic bags purchased	Indicates number of bags used for lawn wastes, etc.	13,500	#/yr
4.1.4	Does the FMS storeroom have a purchasing guide?	Indicates ease of choosing environmental options when purchasing	No	yes/no
Housing items				
4.1.5	<i>Total paint purchased and kept on hand</i>	<i>Background information</i>	<i>FWD</i>	<i>quantity/yr</i>
4.1.5	<i>Amount of low VOC/green paint purchased and kept on hand</i>	<i>Indicates commitment to using low chemical paints in housing areas</i>	<i>FWD</i>	<i>quantity/yr</i>
4.1.5	<i>Total light bulbs purchased</i>	<i>Background information</i>	<i>FWD</i>	<i>quantity/yr</i>
4.1.5	Number of efficient or green (low-mercury) light bulbs	Indicates commitment to energy reduction through light bulb efficiency	0	quantity/yr
4.1.5	Are housing purchases made with a commitment to meet or exceed University standards?	Indicates a commitment to environmental practices	Yes	yes/no

PURCHASING INDICATORS RATIONALE

The Carnegie Mellon University Purchasing policy states that “Buyers and Users should utilize suppliers and service providers that make use, to a practicable extent, of materials and services that support the Carnegie Mellon environmental mission and goals of reducing, reusing and recycling.”²³

Carnegie Mellon has a decentralized purchasing structure which permits departments and individuals to purchase what they need (if the total cost is under \$5,000) immediately and without onerous paperwork. Any individual with a Tartan Trust card (which works like a credit card) can purchase necessary services or items from any vendor or store they wish. For larger purchases a traditional purchase order must be filed. Purchase orders, including details such as the purchaser, the item, the price, and the vendor, are tracked in an Oracle database. Tartan Trust card purchases are not tracked to the same level of detail – the card operates essentially as a credit card does, and procurement services receives only the bill which usually does not contain specific purchase item details. Due to the decentralized purchasing system at Carnegie Mellon, it is difficult to get a complete inventory of purchases made by the University community. Therefore, the indicators for this section are designed to track purchases to the best detail possible, and generally focuses on items that are purchased using an Oracle purchase order.

There are three major purchasing groups at Carnegie Mellon: the administration and academic departments, facilities management services (FMS), and housing. These groups purchase different types of supplies and have differing requirements. The indicators as described below attempt to address these differing patterns. Also, there are several forward-leaning indicators specified that are designed to take advantage of planned changes within Procurement Services or are judged suitable to track anticipated changes that may not be planned at this time.

4.1 Procurement Services

4.1.1 Procurement Services Environmental Goals

Procurement Services manages the purchasing and contracting for the university. The Procurement Services mission statement currently lists several goals to achieve clarity and transparency in purchasing as well as quality of goods and services, but does not include a goal

²³ Carnegie Mellon University Purchasing Policy, February 15, 2002.
<http://www.cmu.edu/policies/documents/Purchasing.html>. Accessed 21 December 2004.

to achieve more environmental purchasing. The addition of this statement would indicate a level of commitment on the part of Procurement Services to consider environmental factors when making purchasing decisions and recommendations for the University.

4.1.2 *Environmental Purchasing Guide*

Procurement Services does not currently offer guidance as to what products are preferred or endorsed by the university beyond the preferred supplier identification. If an environmental purchasing guide were developed, the purchaser could educate themselves about the many environmental alternatives that exist today for a comparable price. An environmental purchasing guide could be as simple as a series of checklists designed to step the purchaser through a series of questions that will facilitate assessment of the environmental impact of a product compared to other options, or as formal as a statement of the University's standard purchasing requirements. The number of hits this guide receives if posted on the procurement services web page²⁴ is an indicator of how frequently it is being used, and can be compared to the number of hits the web page receives overall to gain an estimate of how many people who must purchase something take the time to become educated about environmental alternatives. As discussed before, FMS provides very explicit materials guidelines in the University Design Standards²⁵ and these could be modified or added to in order to create a purchasing guide that considers environmental impacts.

4.1.3 *Green Preferred Suppliers*

Procurement Services manages and contracts with preferred suppliers, who have completed a formalized selection process by Procurement Services or FMS, and can provide supplies or services to the university with potential volume discounts, streamlined procedure for large cost items, and simpler payment methods.²⁶ With the decentralized purchasing as described above and the difficulties tracking purchases with two payment methods, the use of preferred suppliers is one mechanism to achieve better tracking.

The preferred supplier selection criterion does not currently include an environmental component, although purchasing has committed to work with suppliers to support environmental

²⁴ Carnegie Mellon University Purchasing Policies Page. <http://synergy.as.cmu.edu/business/pssm/>. Accessed 19 November 2004.

²⁵ Carnegie Mellon University Facilities Management Design and Construction Page. <http://www.cmu.edu/fms/designcon.htm> Accessed 19 November 2004.

²⁶ Procurement Services Policy and Procedure Manual. pg 45. http://synergy.as.cmu.edu/business/pssm/Policies/pol&proc_121903.pdf, Accessed 19 November 2004

practices²⁷. If potential suppliers were vetted with guidelines similar to those found in an environmental purchasing guide, the purchaser could make an informed choice when deciding on a supplier. Examples of these guidelines are:

- Does the supplier take back and recycle packaging?
- Does the supplier offer greener alternatives to common products (containing recycled materials, low-impact chemical alternatives, etc.)?
- Is the supplier local and are the products offered from local manufacturers?

The existence of green preferred supplier requirement guidelines would indicate an effort by Procurement Services to make it easier for a purchaser to make an environmentally informed choice.

The preferred supplier information is currently online, however procurement services intends to create a web page where the purchaser can click through to purchase needed items from a preferred supplier. If these preferred suppliers were identified with an icon indicating if they have successfully achieved “green supplier” status as discussed above, purchasing environmentally conscious products would be very simple.

4.1.4 Green Contracting

Currently, Procurement Services offers access to several contract templates on their website.²⁸ These templates do not include any “green requirement” contracts. By providing the contracting party with a template that offers a green requirement in the contract, Procurement Services will make it easier for a department or purchaser to require suppliers to provide a less environmentally impactful service or product. The number of green contracts sent out for bid (in quantity and numerical value) will indicate the speed green template contracts are adopted.

Currently there is no way to distinguish service and product providers who are confirmed as “green” (as discussed above) in the accounting database. An ability to query suppliers who are “green” would allow Procurement Services to track the number of environmentally informed purchase opportunities the university purchaser has, and also may serve as an incentive for suppliers to offer more environmental choices in their products. Currently the Oracle database does not permit data management based on environmental factors, and adding this capability to the database would allow greater analysis as to what kinds of environmental purchases people

²⁷ FMS Annual Report, 2002. p. 19. <http://www.cmu.edu/fms/AnnualReport2002.pdf> Accessed 19 November 2004

²⁸ Carnegie Mellon, Standard Contracts and Terms and Conditions.

<http://www.as.cmu.edu/business/pssm/contracts/index.html>. Accessed 19 November 2004.

are making and if a “green supplier” label would benefit the supplier or the University, as well as affording Procurement Services the ability to evaluate the success adding an environmental component to purchasing.

4.1.5 Packaging Reduction Requirements

Carnegie Mellon University purchases a large number of items, and the packaging in which these items are received is often not reusable and must be discarded or recycled. A set of packaging guidelines that could be provided to suppliers (for example, through a mail merge using the Oracle supplier database) and requiring less packaging, packaging that is entirely recyclable, or supplier take-back of the packaging, could easily solve this problem. Tracking this is accomplished by indicating the number of suppliers with whom a reduced packaging level has been negotiated.

4.1.6 Representative Items Purchased

By examining representative items purchased over time, trends in Carnegie Mellon’s purchasing may be ascertained. The following products are chosen as they provide ready opportunity for application of environmental criteria in purchasing.

- Paper: Paper purchased by Carnegie Mellon has a required percent-recycled content. Currently, this content is specified at 30% recycled. The total quantity of paper purchased provides a tracking point into the amount of paper use on campus. This value also is the quantity of recycled paper purchased. There may be purchases that exceed the required 30% recycled, and for this reason the percent-recycled content indicator is a range. The total amount of paper purchased that exceeds the percent-recycled content requirement is an indicator of trends in environmental purchasing. It should be noted that while these paper indicators provide generally good information to the purchasing on-campus, paper is a very easy product to purchase in small quantities with a Tartan Trust card in order to avoid purchasing paper with recycled content.
- Service Supplies: Central Property Services (CPS) is a contracted group that provides janitorial services to Carnegie Mellon. They use toilet paper and paper towels obtained from Carnegie Mellon Purchasing, but must purchase and use green chemicals for cleaning. Using these contractually specified values as indicators is an example of how Carnegie Mellon requires standard environmental decisions from some of their suppliers, and over time these standards may change.

- **Computers:** Currently, Carnegie Mellon has two preferred suppliers for computer purchasers. Some departments still prefer to use other suppliers. The negotiated contract with the preferred suppliers incorporate several environmental requirements such as factory set sleep-mode, acceptance of packaging, etc. The number of computers and electronics purchased each year (in dollar-amount) can be retrieved from the accounting ledger system and compared to the quantity of computers/electronics purchased annually from the preferred suppliers. This will provide an indication of the number of computers that are environmentally screened before purchase.

In order to allow some follow-up to examine the different purchasing decisions the departments make, the top five departments (in purchasing dollars) can be used to direct an interested party to interviews in order to ascertain the success of the initiatives discussed in this chapter.

4.2 Facilities Management Services Purchasing

Facilities Management Services maintains a warehouse for storage of a number of frequently used items. Some of the more frequent purchases can be tracked and analyzed to understand the quantities of everyday environmental purchases. These purchases include light bulbs and paint. Light bulb purchases are considered “green” if they are energy efficient, if they are fluorescent bulbs with low-mercury content, or if they are fluorescent bulbs which replace incandescent bulbs (for example, in an exit sign or light fixture). Low-VOC (volatile organic compound) paint can be purchased to substitute for standard paint, which off-gasses a high level of VOCs during and immediately after use, and is also more hazardous to manufacture.

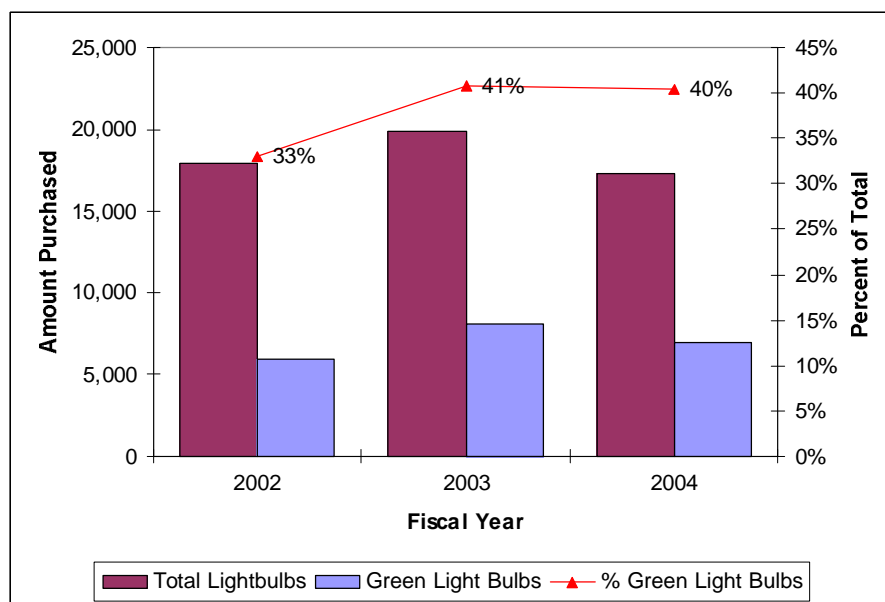


Figure 4-1. FMS Light Bulb Purchases at Carnegie Mellon, 2002-2004

Carnegie Mellon University has developed Design Guidelines that are designed to “provide consistency of quality over all projects.”²⁹ These design guidelines pertain to most purchases and explicitly specify what brands and types of materials should be purchased, including brands for paint, carpeting, and wall coverings. The guidelines do not generally specify more environmentally-friendly alternatives to traditional products. It should be noted that the majority of FMS purchases are guided by the design guidelines and as such may not be the most environmentally-friendly alternative available.

4.3 Housing Purchasing

Housing makes numerous purchasing decisions. For the most part, housing purchasing decisions are governed by University standards. However, there are situations where Housing is able to take the time to research or experiment with a product alternative and make more informed and environmentally decisions than required by the University. Currently there is not a Housing standard purchasing guide, but there is a commitment to achieving *at least* University mandated goals for environmental purchasing. As mentioned before, the FMS design guidelines do not specify low-VOC paint or carpeting with a minimum recycled content³⁰ and therefore

²⁹ Carnegie Mellon, Facilities Management Services Design and Construction. <http://www.cmu.edu/fms/designcon.htm>. Accessed 20 November 2005.

³⁰ Carnegie Mellon University Design Guidelines, Sections 09680 and 09900.

Housing is often able to achieve a higher percent recycled content or a lower VOC paint than required. Also, all new Housing construction and renovations are performed to LEED standards which prescribe specific environmentally-friendly achievements. Therefore, indicators of Housing purchasing include ranges of percent recycled achieved (toilet paper, new carpeting) to show areas where Housing has achieved goals above those set by the University.

The use of energy efficient light bulbs is an excellent representative product for Housing. Currently all light bulbs are purchased from a large hardware store (such as Lowes or Home Depot), and are not energy efficient. A test installation is anticipated for the near future and depending on the light bulbs performance, Housing may adopt efficient light bulbs as the standard to use. To track this development, the percent of light bulbs purchased by Housing that are energy efficient is included as an indicator. This is an example of a piece of information that would be impossible to obtain without cooperation from Housing because a TartanTrust card is used for the purchase.

4.4 CPS Purchasing

As discussed in Section 4.1.6, CPS is a contracted entity that performs janitorial services for the university. The CPS contract specifies that green supplies must be used. These are currently obtained from 3M Corporation. The quantity of green supplies purchased and the quantity of all supplies purchased indicate the ability of CPS to use the low-impact chemicals and achieve the expected standard of cleanliness.