

A Green Procurement Primer

What you'll find in this section

Read this section to learn about what is meant by green procurement and to find examples of green procurement in action. It provides information on the benefits of green procurement and how it can help advance government's priorities and reduce the environmental impacts of government's operations. In addition, this section debunks some common myths about green procurement.

1.1 What is Green Procurement?

Green procurement is about minimizing negative environmental and health impacts associated with what people buy. It is about buying products and services that are more energy efficient, less toxic, safer for workers, have recycled content or come with less packaging.

Green procurement isn't a new method of purchasing, but rather a refined approach to the way we buy already. It encourages staff to think about:

- » **The need the product or service fulfills**, whether the need can be met in another way or if the purchase needs to be made at all.
- » **A product's impact on the environment over its life cycle** from manufacturing to use and ultimately to the disposal of the product.
- » **The total cost of a product over its life cycle** (rather than just the upfront purchase cost).
- » **Overall value for money for government** (by factoring in quality, performance, price, environmental performance and availability rather than price only).

What is Green Procurement?

Green procurement means seeking products or services that have a lesser or reduced adverse effect on human health and the environment when compared to competing products or services that serve the same purpose.

This comparison may consider raw materials acquisition, product manufacturing, packaging, distribution, reuse, operation, maintenance, or disposal of the product or service. It is also sometimes called Environmentally Preferable Procurement (EPP).

Green procurement isn't about buying the greenest possible product on the market. Instead, it's about ensuring that the green issues that are strategic priorities for a particular organization are sufficiently considered as part of the overall procurement decision.

What is the Life Cycle of a Product?

The life cycle of a product refers to all the stages of a product's life from-cradle-to-grave, i.e. from raw material extraction through materials processing, manufacturing, distribution, use, repair and maintenance, and ultimately disposal or recycling.

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Examples of Green Products and Services

Green products and services are innovatively designed to have minimal or reduced impact on the natural environment and enhance workplace health and safety. Examples include:

- » **Recycled paper**, which reduces the amount of greenhouse gas (GHG) emissions associated with harvesting trees and saves water and energy consumed through the manufacturing of non-recycled paper products.
- » **Green cleaning supplies**, which reduce or eliminate the use of toxic chemicals linked to diseases such as asthma and cancer, reduce transportation emissions by shipping in ultra-concentrated formulas, and stop environmental contaminants from ending up in rivers and oceans.
- » **Products carrying ecolabels** such as ECOLOGO or Green Seal, which give buyers assurance that the environmental and health benefits claimed for a specific product have been verified by an independent third party. For more information on ecolabels, see the reference sheet '[The World of Environmental Performance Labels](#)' in Section 3.
- » **Hybrid vehicles**, which get approximately 25 percent better fuel mileage than gasoline fuelled cars because they are powered by both electric and gas-powered motors.

Total Cost of Ownership or Life Cycle Costing

To assess the total cost of ownership of a given product, buyers look beyond a product's initial purchase price and consider the costs associated with the life cycle of a product. Total cost of ownership calculation or life cycle costing is most typically used for equipment that:

- » Will be used for a long time
- » Requires regular maintenance
- » Requires power/fuel supply
- » Uses consumable supplies and parts

Behaviours can also be Green

Your behaviour can also be green. Green procurement encourages you to consider your purchasing habits to see where you can be more efficient and buy less, i.e. reduce your overall consumption and number of purchases.

Examples include:

- Print and copy double sided
- Use electronic data storage
- Dial in—don't drive or fly

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Green Saves Money

The table below provides an illustrative example of how you could consider the total cost of similar products throughout the life cycle of their purchase including use and disposal:

	Inkjet Printer	Laser Printer
Capital cost	\$69	\$400
Cost of cartridge	\$19 per ink cartridge	\$115 per toner cartridge
Amounts of pages yielded per cartridge	170 pages	8000 pages
Example: 50 sheets of paper used per day, 300 days a year	15,000 sheets per year	15,000 sheets per year
Annual cartridge costs	\$1677 per year	\$216 per year
Extra staff time ordering & replacing cartridges (10 min/cartridge @ \$20/h)	\$294 per year	\$6 per year
Total cost in 1st year of ownership	\$2040	\$622

Source: Small Business Computing www.smallbusinesscomputing.com/ProductReviews/Hardware/a-modern-guide-to-multifunction-printers.html

What this example really highlights is that lowest initial price does not necessarily mean the lowest total cost once you consider other factors, such as maintenance and replacement cost. This is important to keep in mind when you are responsible for stewarding taxpayer money and managing budgets within your department or organization.

Remember, cheapest upfront price does not necessarily mean lowest cost. See a great example from Nalcor Energy in [Section 2](#) for more information on how the total cost of ownership can work to your advantage in a tender.

Did you know?

Out of the 60 million inkjet cartridges and 44 million toner cartridges used each year in Canada alone, less than 8 percent are recycled leaving over 95 million of them being thrown away and ending up in landfill sites. It takes nearly 3.5 litres of oil to make just one printer cartridge. In less than a year, recycling cartridges could save more oil than the 42 million litres spilled by the Exxon Valdez oil tanker.

Sources: InkCanada and Alberta Environment

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Did you know?

If each household in Canada replaced one roll of virgin toilet paper with just one roll of recycled toilet paper, we could save 47,962 trees and 65.5 million litres of water.

Source: University of Toronto Scarborough

Did you know?

1 metric ton of recycled paper can save:

- 3 cubic metres of landfill space
- 17 nine metre (pulp) trees
- 29,000 litres of water
- 1,400 litres of oil
- 4,000 kilowatt-hours of energy

And, at the same time, eliminate 30 kg of air pollutants.

Source: New Brunswick Solid Waste Association

Did you know?

A 2008 study about occupational injuries among cleaners in the healthcare sector in British Columbia showed that chemical exposure was responsible for 43 percent of all allergy and irritation incidents among workers.

Source: David Suzuki Foundation

1.2 Why is Green Procurement Important?

The Benefits of Green Procurement

Choosing environmentally preferable products and services can have powerful benefits—for the Provincial Government, for the environment and for wider society. With the exception of the Build Better Buildings policy, the Government of Newfoundland and Labrador has no policies that require officials to buy green, however, government has committed to lead by example in many key areas such as improving energy conservation and efficiency, and diverting waste from landfills. Given this and the many advantages to be gained through green procurement by choice, government wants to actively encourage and facilitate action to green procurement. Benefits include:

✓ Reducing Negative Impacts of Products and Services on the Environment

Green procurement can help an organization to make major cuts in greenhouse gas emissions that cause climate change—through energy efficient construction and transport, and choosing products and services with a lower carbon footprint throughout their life-cycle. The amount of waste that is generated, the use of resources and materials, and air and water quality—all are affected by the purchases we make.

✓ Mitigating Negative Impacts on Health and Safety

Switching to environmentally preferable, less toxic products, materials or substances can improve workplace health and safety while also reducing long-term health risks and liability. Greener products such as cleaners, paints and furniture contain fewer or no toxic and hazardous ingredients and indoor pollutants such as volatile organic compounds (VOCs), therefore improving indoor air quality and reducing the incidence of diseases, such as occupational asthma and cancer related to chemical exposure. Where the workplace is a school or a hospital it can also benefit the health of children, patients and employees and others who would otherwise be exposed to toxins.

✓ Creating Financial Savings

Green procurement is efficient procurement. It can generate considerable cost savings because green products and services typically:

- Use resources such as water, fuel and other resources more efficiently, amounting to considerable savings to government from reduced resource consumption. Examples include fuel efficient vehicles and energy and water saving appliances.
- Are more durable, innovative, and high efficient and are less costly to operate, maintain, replace and dispose of over time.

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Did you know? The Federal Government Committed to Green Procurement in 2006

The Federal Government, through the Department of Public Works and Government Services, has a [Policy on Green Procurement](#) that was approved in 2006. The Policy aims to reduce the environmental impacts of government operations and promote environmental stewardship by integrating environmental performance considerations in the procurement process.

Source: Public Works and Government Services Canada

- Lower the risks of hazardous materials or spills, as well as waste and pollution accidents, which can lead to legal action, fines and higher insurance premiums. For example, purchasing biodegradable hydraulic fluids for hydraulic system equipment instead of conventional fluids made of petroleum and toxic chemicals significantly reduces the clean-up costs of spills and leakages.
- Use less toxic and more environmentally friendly products reducing the risk of workplace chemical exposure and illness or disease that could result in absenteeism and liability costs for the employer.

✓ **Transforming the Market for Greener Products and Driving Innovation** Government has a role in demonstrating leadership and contributing to a future that aligns with the public's expectations of environmental stewardship. Buying green supports businesses that are providing products and services with fewer environmental impacts and thus stimulating green, innovative product and business development.

Buying Green Supports Government of Newfoundland and Labrador's Environmental Priorities

In 2011, the Government of Newfoundland and Labrador released its [Climate Change Action Plan](#) and [Energy Efficiency Action Plan](#) that included a commitment to “explore the potential to utilize the government's procurement power to promote greater energy efficiency, lower GHG emissions and reduce waste”. The Province is also continuing to implement its [Provincial Solid Waste Management Strategy](#). Green procurement might be one of the most effective levers to reduce the environmental impacts of government operations.

In the Province of Newfoundland and Labrador, core government and GFBs have already started making greener purchasing decisions. For example, the Newfoundland and Labrador Housing Corporation buys appliances such as ovens, dishwashers and refrigerators that are energy efficient, thereby reducing energy consumption and costs. The Office of the Chief Information Officer (OCIO) only purchases desktops and laptops that are Energy Star 5.0 approved and EPEAT Gold certified. Lastly, other large public institutions have their own green purchasing initiatives. For example, Memorial University of Newfoundland (MUN) has a sustainable food purchasing initiative underway.

Green Procurement in Newfoundland and Labrador Isn't New

At a new long-term government funded care facility in Corner Brook, a number of energy-saving features, like a ground-source heat pump and sensors to turn lights off when rooms are not occupied, have led to significant energy and cost savings. The building uses 53 percent less energy and saves roughly \$270,000 annually compared to a building built to traditional standards.

Source: Government of Newfoundland and Labrador

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Mitigating Environmental Risks: Hydraulic Fluid – City of St. John's

The City of St. John's introduced the Curb it Recycling program for the residents of St. John's in October 2010. In order to implement this program, the City purchased new garbage trucks that could take recycling on one side and regular household garbage on the other. In order to ensure environmental safety, part of this program required the use of environmentally friendly hydraulic fluid. In the past, when hydraulic fluid was spilled (mostly due to busted hoses), the fleet department was called out to fix the hose and use absorbent on the spilled fluid. This process could take anywhere from 30 to 60 minutes. Now, there is no environmental hazard if the fluid is spilled on the street or enters a storm drain. The cost of this product is significantly more than regular hydraulic fluid but its use mitigates the risk to the environment and saves time.

Source: City of St. John's



1.3 Busting Green Procurement Myths

Green buying practices and the marketplace for greener products have come a long way in the last 25 years. Nevertheless, people still cling to a variety of myths about green products and services. Let's look at a few of the more common myths and set them straight.

It is going to cost more.

In many cases, purchasing green products now costs the same as buying traditional or less environmentally preferable products. Energy saving laptops or monitors, for instance, typically cost no more than less efficient ones.

In some cases, costs are slightly higher. A price comparison of a 5000 sheet/case (8-1/2" x 11") of conventional copy paper to a case of copy paper certified by the Forest Stewardship Council (which assures that the paper comes from responsibly managed forests) shows that the environmentally preferable option costs \$1 more per case; a price difference of approximately 2 percent. In other cases, costs are still significantly higher, e.g. for bio-based hydraulic fluids, often because the marketplace is not as developed yet. In these cases, avoiding substantial environmental risks and mitigation costs in the future can justify a higher purchasing price (see example on the left).

When you consider the lifecycle or total cost of a product or service — green often turns out to be the most responsible financial choice due to operating cost savings, lower costs of disposal and lower health and safety risks. Green cleaning products made of ultra-concentrated formulas are de facto cheaper as less detergent is stored and used for the same cleaning tasks. By switching to green cleaning products, Dalhousie University was able to reduce costs as new cleaning products have a higher dilution rate and last much longer. They were also able to decrease their cleaning product inventory by 75 percent.

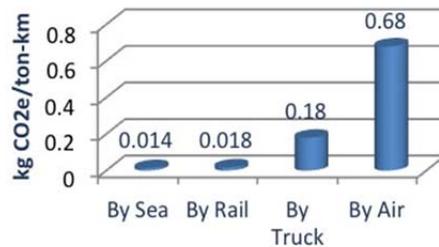
Green products and services don't work as well.

These days, it is very rarely the case that a green product or service doesn't perform just as well as a traditional product. Most of the time, green products meet the same performance and quality specifications as their standard counterparts and may actually provide superior characteristics. In many product and service categories, such as office paper, IT equipment, cleaning supplies, office furniture, and appliances, the green market is well developed and products have long since proven themselves and often demonstrate superior green features. For example, a laptop that is certified to the gold level of the Electronic Product Environmental Assessment Tool (EPEAT) standard performs just as well as a non-certified product but has superior green features, such as having a minimum of 65 percent reusable/recyclable content or 90 percent recyclable packaging.

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Transportation GHG emissions per ton-kilometre of product shipped



Source: Emissions factors from: Climate Leaders, Optional Emissions from Commuting, Business Travel and Product Transportation. US EPA, May, 2008.

There are not enough green products and services available.

The market for green products has exploded in the last ten years. In some product categories, almost every choice on the market is green to some extent. Think about appliances for example. Almost all dishwashers, clothes washers, refrigerators and freezers have an ENERGY STAR certification and many appliances are required to have an EnerGuide rating. Yes, some are more efficient than others, but it would be difficult to find one on the market that was a real 'power hog' like the old beer fridges often found in basements. For example, ENERGY STAR dishwashers are now 67 percent more energy efficient than a 1990 model. Paint is similar; nearly all paints on the market today are low in Volatile Organic Compounds (VOCs).

Green procurement will take too much time.

While it can be challenging, at first, to consider changing the way you select products and services to consider more environmentally preferable choices, green procurement doesn't necessarily have to take much extra time, especially not after it has become part of the regular purchasing process. Initially, it requires a learning process to consider environmental issues when developing and evaluating purchasing requirements. In the case of government tenders and RFPs, there is usually ample time during the assembling process to think about the green risks and opportunities that might apply to a product or service category. And after developing a number of solicitation documents, staff will be more familiar with recurring environmental issues and it will require less time.

If it is a small-scale purchase, such as a laser printer or stapler, then it shouldn't take any extra time to consider if the product is over-packaged (or likely to be) in a material that will be difficult or impossible to recycle. And it only takes a few minutes to get familiar with some of the common environmental certifications like ECOLOGO, ENERGY STAR or Green Seal, and it's easy enough to look for these symbols as you consider different product options. For more information on ecolabels, see the reference sheet '[The World of Environmental Performance Labels](#)' in Section 3.

Our transportation emissions void the benefits.

Regardless of what type of product you buy (green or not) transportation emissions can't be avoided. By necessity, bulk materials and finished products are shipped to Newfoundland and Labrador by sea and air. Transportation by sea is the most energy efficient and least greenhouse gas emissions intensive. Transportation emissions are directly related to the mode of transportation, the mass of the goods/materials being shipped, and the distance travelled. Shipping by air generates 48 times more greenhouse gas emissions than transportation by sea. Your best choice is shipping by rail or sea regardless of the type of product. (See the sidebar diagram for reference.)