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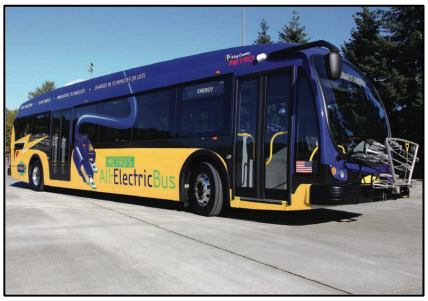
THE BUCK STARTS HERE

Sustainable Procurement Playbook for Cities



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AUTHORS

Alicia Culver is the primary author of this *Playbook*. She has over two decades of experience working with government agencies, public institutions, and businesses developing and implementing sustainable program policies, programs, and practices. She is currently the Executive Director of the Responsible Purchasing Network (RPN).

Tim Reeve and **Natalie Duronio** of Reeve Consulting work with municipalities and other government agencies across Canada to share sustainable procurement resources and best practices through a national professional network called the Municipal Collaboration for Sustainable Procurement. They have provided examples of model sustainable procurement policies and practices, case studies, and business case examples from Canada.

Kelly Panciera is the principal of Green Spectrum Consulting and an RPN Research Associate, who provided expertise on sustainable procurement policies as well as editing assistance.

Rebecca Calahan Klein is an RPN consultant who helped to facilitate the monthly meetings with the *Playbook* Committee.

Linda Novick is an RPN Research Associate, who provided expertise on sustainable vehicle procurement.

Amy Roth is principal of Avencore Group and an RPN Research Associate, who provided expertise on sustainable electronics procurement.

Edmund Zagorin is an RPN Research Associate, who provided expertize on sustainable procurement of building materials.

PLEASE GIVE US YOUR FEEDBACK

The *Playbook* is designed to serve as a go-to resource for USDN and RPN members as well as local governments across the US and Canada, to catalyze the launch and expansion of sustainable procurement programs and the standardization of approaches to sustainable procurement at the local level. If you have comments on or suggestions for improving the *Playbook*, please contact Alicia Culver, Executive Director of the Responsible Purchasing Network at **Alicia@ResponsiblePurchasing.org**.

We are interested in having the *Playbook* distributed as broadly as possible, if you would like hard copies of the *Playbook* to share with colleagues in your community, or a network organization you belong to, please let us know.

Participating in the development of the *Playbook* enabled many project participants to update/enhance their own sustainable procurement efforts, as well as work together collaboratively in several key product categories. The results of these efforts are shared throughout the *Playbook.* We are interested in continuing to track how the *Playbook* is influencing action by cities across the county. Please share your story with us.

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Chapter 1: Introduction and Executive Summary

Local governments spend billions of dollars through their procurement of goods and services, creating unique opportunities to generate a variety of sustainability benefits. Although sustainable procurement is widely practiced by local governments, it is far from standardized as a municipal best practice. Many cities (and counties) are working on their own to develop their sustainable purchasing policies, programs, procedures and contract specifications. They can benefit greatly from sharing market research, model policy and bid specification language, effective program designs and procurement strategies, successful education and outreach approaches, and practical tracking and reporting procedures.

THE *SUSTAINABLE PROCUREMENT PLAYBOOK FOR CITIES* PROJECT

In late 2014, 19 members of the Urban Sustainability Directors Network (USDN) came together to create a project to help them:

- enhance and strengthen their city's sustainable procurement efforts by learning about and implementing best practices developed and tested by other USDN members;
- identify and work collaboratively on high-impact sustainable procurement opportunities; and
- create the USDN *Sustainable Procurement Playbook* to help other cities undertake similar sustainable procurement efforts in their communities.

The City of Chicago served as the lead USDN city for this project, and was joined by the following cities: Ann Arbor (MI), Austin, Houston and San Antonio (TX), Boston and Somerville (MA), Burlington (VT), Fairfax (VA), Lakewood, Orlando and Sarasota (FL), Oklahoma City (OK), Palo Alto and San Francisco (CA), Salt Lake City (UT), Washington, D.C., Vancouver (BC, Canada), and Winnipeg (MB, Canada).

Responsible Purchasing Network (RPN) was the technical consultant for the project.

Primary funding for the *USDN Sustainable Procurement Playbook* Project was generously provided by the USDN Innovation Fund. Global Philanthropy Partners served as the project's fiscal sponsor. Additional funding was provided by the Roy A. Hunt Foundation.

HOW THE PLAYBOOK WAS DEVELOPED

The *Sustainable Procurement Playbook* was developed through:

- An online survey of the 19 participating cities about their sustainable experiences, challenges, successes and priorities;

- In-depth interviews with the participating cities about their sustainable procurement policies, program design, practices and priorities;
- Analysis of annual spending by participating cities;
- Identification of high-impact priority areas for sustainable procurement for individual cities and for the USDN project participants as a whole
- Extensive research into successful sustainable procurement policies and practices that have been adopted by other USDN members and other local governments in the US and Canada; and,
- Review of sustainable procurement policies, best practices, standards and tools from RPN, the Sustainable Purchasing Leadership Council, the Green Electronics Council, the Municipal Collaborative for Sustainable Procurement (based in Canada), the West Coast Climate and Materials Management Forum, and other leading sustainable procurement organizations.

The cities involved in the project discussed each topic, reviewed drafts of the *Playbook*, and gave comments to RPN. In addition, participating cities used the draft *Playbook* to inform real-time choices they were making to start, modify or expand their sustainable procurement policies, programs and practices. Finally, participating cities have expressed interest in working together collaboratively on sustainable procurement projects that will yield meaningful and measurable results.

WHAT YOU WILL FIND IN THE *PLAYBOOK*

Many cities and counties want to develop or update their sustainable purchasing **policies** and need best practice examples, sample language and practical guidance. In addition, local governments, whether they are starting or strengthening an existing sustainable procurement effort, need examples of best practices for designing and implementing an effective sustainable procurement **program**.

Municipalities are often looking for models of how to:

- **Communicate the business case for sustainable procurement** to internal and external stakeholders by demonstrating that sustainable procurement can not only help municipalities meet their sustainability goals but can also often pay for itself and contribute to the local economy.

- **Develop clear and actionable policies** that achieve desired sustainability outcomes such as climate protection, toxics reduction or elimination, resource conservation, public health improvements and local economic development.

- **Identify high-priority sustainable procurement opportunities** (associated with capital projects, commodity contracts and service agreements) that will help reach their sustainability goals.

- **Establish clear, defensible and effective sustainable procurement standards and procedures** to ensure that their policy is fully and consistently followed.

- **Design a coordinated outreach program** to inform employees and vendors about their sustainable purchasing policies, standards and procedures.

- **Ensure sufficient technical resources** are available to the purchasing team.
  Track and report sustainable procurement activities and impacts including measurable environmental benefits (e.g., reductions in electricity, water and paper consumption; avoidance of greenhouse gas emissions; etc.), health benefits (e.g., elimination of chemicals known to cause cancer or asthma from building maintenance products), and cost savings.

This *Sustainable Procurement Playbook* provides practical advice, best practices, resources and tools to help cities with their sustainable procurement efforts.

- **Chapter 1** provides an introduction to sustainable procurement.
- **Chapter 2** focuses on how to make the business case for sustainable procurement.
- **Chapters 3 and 4** describe how to develop a sustainable procurement policy and how to build, implement and sustain successful sustainable program
- **Chapters 5, 6, and 7** provide practical tools and examples for doing a spend analysis, setting priorities, creating contracts and tracking and reporting results.
- **Chapters 8, 9, and 10** provide real world examples of how to undertake and leverage sustainable procurement activities in three high-impact product categories: electronics, fleet vehicles, and building materials.

Throughout the *Playbook*, you will find:

- **Examples of best practices** by project participants and other USDN members.
- **Model language** for sustainable procurement policies.
- **Guidance for designing and implementing a high-functioning and practical sustainable procurement program** that addresses issues such as staff roles and responsibilities, communication methods and training.
- **A customizable *Sustainable Procurement Prioritization Tool*** to help cities focus their sustainable procurement efforts on product and service categories that can yield significant environmental, health and economic benefits.
- **Recommended procurement guidance for several high-impact product and service categories** that were identified by USDN members using the *Sustainable Procurement Prioritization Tool* (including bid specifications, vendor survey questions, and bid evaluation procedures).
- **Environmental benefit calculators as well as other tools and strategies for tracking and reporting** sustainable procurement actions and benefits such as energy and water conservation, greenhouse gas reductions, waste prevention, and cost savings.

EXECUTIVE SUMMARY

Chapter 2: Making the Business Case for Sustainable Procurement

Sustainable procurement is an important activity local governments can undertake to demonstrate that they are leading by example. It not only enables cities and counties to gain experience with sustainable products and services that are available from local firms, it gives them credibility when they ask businesses and residents to follow suit. But this sustainability strategy is much more than that.

Many municipalities are discovering that sustainable procurement can help them make *measurable* progress toward achieving their sustainability goals. Here are some examples:

- Greenhouse gas emissions can be significantly reduced by purchasing electric and hybrid-electric vehicles, LED light bulbs and fixtures, energy-efficient computers and appliances, solar panels, electricity from wind, solar and coal-free sources, and even recycled copy paper.

- "Zero Waste" goals can be supported by replacing polystyrene cups and plates with reusable and compostable options, polystyrene cups and plates with reusable and compostable food service ware, bottle water with water bottle refill stations, paper towels with high-efficiency hand dryers, and single-use batteries with rechargeables.

- A significant amount of water can be conserved by choosing water-efficient washing machines and toilets, microfiber mops, and foaming hand soap (instead of liquid).

- Municipalities can combat asthma by eliminating cleaning chemicals, disinfectants, floor maintenance chemicals, paint, furniture, and flooring products that contain known asthma-causing chemicals; by installing anti-idling devices in fleet vehicles; and by switching from conventional diesel to renewable biodiesel in transit buses and trucks.

- Local governments can meet their social responsibility, diversity, and local economic development goals by giving preference to goods and services that are certified as fairly traded; offered by certified disadvantaged businesses, B Corps, or worker-owned cooperatives; or locally sourced.

Sustainable procurement can also save jurisdictions money by favoring products that are more resource-efficient, that last longer, and that have lower maintenance and disposal costs.

Chapter 3: Developing a Sustainable Procurement Policy

A comprehensive sustainable procurement **policy** can lay an important foundation for an effective sustainable procurement program, especially if it is created by a broad group of stakeholders, including top-level managers, procurement and sustainability staff, and end-using departments. At a minimum, it should:

- Clearly delineate staff roles and responsibilities;
- Call for the creation of sustainable procurement plans, procedures and implementation tools;
- Direct the jurisdiction to make sustainable procurement the "default activity" for major purchasing decisions and set sustainable procurement goals;
- Encourage employees to use credible eco-labels and "best value" assessment methods when making purchasing decisions; and
- Include tracking and reporting requirements.

Lessons Learned: Local governments should consider re-energizing their sustainable procurement program by adopting a complementary sustainable procurement policy that addresses a specific type of product (e.g., bottled water, cleaning products, food, or paper) or promotes a specific sustainability outcome (e.g., buy local, climate protection, sweatshop-free, or toxics reduction).

Chapter 4: Designing a Sustainable Procurement Program

For a sustainable procurement program to be successful, it must be treated as a team activity, including top-level support, clear leadership by procurement, strong support by sustainability staff, and ongoing engagement of end-using departments to ensure that sustainable products meet their needs and technical requirements.

Other important elements of an effective sustainable procurement program include:

- Dedicated staff time, including a central point-of-contact and technical support needed to identify sustainable attributes of products and suppliers;
- Periodic planning and prioritization to identify upcoming high-impact opportunities;
- Development of Sustainable Procurement Procedures Manual for your jurisdiction, including model specifications, vendor survey questions, and contract boilerplate language (related to applicable policy language, approved eco-labels, chemical restrictions, product labeling, packaging standards, product take-back and recycling requirements, "green" spend reporting, piggybacking, etc.);
- A team approach to undertaking sustainable procurement actions (see *Lessons Learned*, below);
- A coordinated education and outreach program for staff and vendors including, notably, a one-stop sustainable procurement website that highlight your jurisdiction's sustainability policies, specifications, contracts, success stories, training and promotional videos, progress reports, etc.; and
- Tracking and reporting sustainable purchasing activities, accomplishments, and impacts.

Lessons Learned: It is important to include sustainable procurement in staff performance reviews and cover sustainable procurement in existing staff training and vendor outreach materials.

Ideally, **Purchasing** will the take the lead in convening a product-specific **Sourcing Team (**which includes high-volume contract users) for each targeted sustainable procurement actions, informs it of the contract scope, timeline, and procurement strategy (e.g., RFP versus Invitation to Bid), and provides past bid-solicitation documents including specifications, bid sheets, core list, and historic usage data.

Sustainability will take a leading role in supporting **Purchasing** and the **Sourcing Team** by identifying applicable standards and credible third-party certifications for the product category, evaluating potential cooperative purchasing opportunities, and proposing sustainability-related specifications, vendor survey questions, and contract language (re: product labeling, green spend reporting, packaging and recycling, etc.). During the bid evaluation process, **Sustainability** should help evaluate the sustainability attributes of products offered by bidders as well as their answers to sustainability-related questions. Once the contract is awarded, it would monitor vendor compliance with the sustainability requirements in the contract and helps **Procurement** with tracking and reporting sustainable spend and resulting environmental and economic benefits.

High-volume end-users should participate in relevant **Sourcing Teams** to ensure that sustainable products meet the jurisdiction's technical requirements. They should share their experiences with the products they have been using – as well as any sustainable product options they have tried – and approve the sustainability specifications and list of items on the bid list before these documents go to Procurement. They may need to pilot test sustainable options.

As much as possible, sustainable procurement should be a "cut and paste" activity, where purchasing agents use pre-populated sustainable procurement templates that are developed for targeted product categories.

Chapter 5: Setting Sustainable Procurement Priorities

Local governments can become easily overwhelmed if they try to green every purchasing decision. And, if they focus on low-impact sustainable procurement actions, they may miss high-impact opportunities. Since many have limited staff resources, it is very important to pursue those that will result in the "biggest bang for the buck" and that are strongly aligned with sustainability goals articulated in their sustainable procurement policy or sustainability plan.

Best practices for setting sustainable procurement priorities include:

- Creating a team to undertake the prioritization process;
- Identifying the most relevant policy drivers;
- Conducting a "sustainability spend analysis" to identify categories of goods and services that may have significant environmental, health, social, and/or economic impacts;
- Reviewing contracts to find upcoming sustainable procurement opportunities; and
- Developing a sustainable procurement action plan for the coming 1-3 years that prioritizes your jurisdiction's efforts on product categories that are:
    a. High-spend
    b. High-impact (and align with your sustainability goals)
    c. Easy to implement (low-hanging fruit)
    d. Likely to yield multiple sustainability benefits
    e. Innovative

Lessons Learned: It is important to aggregate all of the commodity and service contracts for each category since some (such as janitorial cleaning) can be divided between the two. Also, municipalities can get more traction if they address an entire category of products – rather than individual contracts – by developing model bid templates for similar contracts.

A good strategy is to include some product categories in the mix that are relatively easy because the market for sustainable goods or services is relatively mature, there are many products with credible third-party eco-labels, or other jurisdictions can take them on. This will help your program gain momentum. Encourage different agencies to take the lead on sustainable procurement initiatives that are of strong interest to them. Focusing on product categories that can save money or yield measurable sustainability benefits can help your sustainable program team make the business case for additional resources.

Chapter 6: Creating Contracts for Sustainable Goods and Services

Many municipal leaders in sustainable procurement utilize strategies to make the process easier or effective at securing discounts on goods and services with verifiable sustainable attributes. These strategies include:

- Looking for opportunities to use an existing contract that has been developed by a neighboring local government, state agency, or an established cooperative purchasing organization, which avoids the need to go through the contracting process altogether;
- Tailoring bid solicitation documents, including specifications and vendor survey sheets, that have been developed by another jurisdiction;
- Surveying the market – either formally with a Request for Information (RFI) or informally through online research or pre-bid meetings – to assess the availability, price, and performance of sustainable products from local suppliers;
- Conducting a pilot test to identify sustainable products that will best meet your needs;
- Referencing third-party certifications and credible standards (such as EPA's recycled-content guidelines) in bid specifications, which makes the bid evaluation process easier and less subject to a bid challenge;
- Evaluating vendors by including a vendor sustainability questionnaire in your bid solicitation package;
- Creating a "green" market basket or "core" list to secure deep discounts on sustainable goods and services and remove conventional products from your list of high-usage products;
- Ensuring compliance with specifications during the bid evaluation process and awarding points to bidders that offer additional sustainability services such as training, recycling, sustainable packaging, and transportation services, etc.;
- Developing "all-green" contracts, which may secure lower prices on sustainable products and makes education and tracking easier;
- Considering using a reverse auction to secure more attractive pricing on sustainable products;
- Awarding the contract to multiple vendors of sustainable products to give contract users product choices and to foster price competition over the life of the contract;
- Consider awarding some or all of the sustainable products separately to enable vendors that do not offer conventional products to compete;
- Ensuring that all products offered on the contract meets the sustainability criteria in the bid solicitation document; and
- Promoting the sustainable products on your new contract to end-users soon after the contract has been awarded.

Lessons Learned: When using a contract that has been created by another jurisdiction, read the bid solicitation and contract carefully to make sure it offers all of the products with attractive pricing. In addition, make sure that vendors are required to provide training, labeling, reporting, and other services that you will need to ensure a smooth transition to using the sustainable products the vendor offers. Vendors will sometimes agree to adhere to additional sustainability requirements if you include them in your participating agreement. For example, they may be willing to let you add more sustainable products to the contract's core list so that those items qualify for deeper discounts.

If you have an existing contract with a vendor, ask them whether they can offer better pricing on another contract that you can use. Many municipalities automatically extend contracts (especially if they are understaffed or backlogged on their procurements). But optional contract extensions are an important time to reassess your contract and vendors. They can be used strategically to convince existing vendors to do a better job at providing sustainable products and services, at training, or at tracking and reporting the contract's sustainability benefits. If the contractor is not doing a good job at offering sustainable products to your contract users, you have the option not to extend it. Alternatively, if they are doing a

good job, you may be able to continue using them through another contract that would give you equivalent (or possibly better) pricing.

Municipalities can often save significant amounts of time and money by collaborating with other cities and counties to jointly develop and issue bid solicitations for sustainable goods and services. This has been done effectively for products such as solar PV systems, compostable food service ware, and other products. In addition, some local councils of governments (COGs) are coordinating solicitations for sustainable products (such as electric vehicles and LED street lights) on behalf of multiple jurisdictions. Others are encouraging the members of their COGs to routinely add a "me, too" clause to make piggybacking easier and promoting the green contracts to their members.

Chapter 7: Tracking and Reporting Sustainable Procurement Results

While tracking the impacts of a municipality's sustainable procurement activities is a challenging task, it is an essential element of a program's long-term success because it can help the Sustainable Purchasing Team:

- Effectively make the case for a sustainable procurement program by demonstrating that it is helping them meet their sustainability goals;
- Convince mayors and other municipal leaders to devote more financial resources to the program;
- Demonstrate to policymakers and the public that the jurisdiction's sustainable procurement policy is being implemented;
- Gain credibility with the community by demonstrating how their jurisdiction is "leading by example;"
- Qualify for sustainability awards, certifications, and grants; and
- Identify opportunities for improving the jurisdiction's sustainable procurement program.

Best practices for tracking and reporting sustainable procurement activities and impacts include:

- Incorporating tracking and reporting requirements into your jurisdiction's sustainable procurement policy;
- Developing a tracking and reporting plan that identifies key performance indicators (KPIs);
- Tracking sustainable procurement *activities* (such as the number and dollar value of new contracts that were created) and *impacts* (such as number of sustainable products that were purchased as well as resulting environmental, health, and economic benefits);
- Requiring approved vendors to provide data on the amount of sustainable products and services they sold to your jurisdiction on an annual basis;
- Establishing all-green contracts to make the "green spend" tracking process easier; and
- Communicating the results of your tracking efforts to policy-makers, employees, and the public on an annual basis.

Lessons Learned: The results of your tracking program can provide valuable insight about how well your sustainable procurement initiatives are working and can help your team identify opportunities for further improvement.

A growing number of municipalities are using new e-procurement systems, which "tag" sustainable products, to make their tracking process easier and faster. In such cases, it is important to put effort in

upfront to make sure that all of the items that are "tagged" as sustainable comply with your specifications.

Alternatively, if you are requesting information from multiple vendors, the development of a reporting template can help ensure that you receive data that is complete and consistent among different firms; this will cut down on the time it will take to analyze it.

Many third-party certifiers of products (e.g., the ENERGY STAR program) and other nonprofit organizations (e.g., the Environmental Paper Network) have developed calculators that make it relatively easy to estimate the environmental benefits of buying energy-efficient electronics, recycled-content paper, and other environmentally preferable products.

Chapter 8: Sustainable Procurement in Action: Electronics

Local governments spend millions of dollars on electronics and related products, including computers, monitors, imaging equipment, servers, and toner and ink cartridges, each year. Not only is electronics a big ticket product category, but it also has many environmental impacts that span the entire product lifecycle from manufacture to use to end of life.

Best practices for buying green electronics include:

- Forming a green electronics procurement team to develop and implement procurement, operational, and end-of-life waste management strategies for your electronics;
- Creating either a stand-alone green electronics policy or incorporate green electronics procurement language into existing sustainable procurement policies or broader sustainability policies;
- Developing a green electronics procurement implementation plan identifies important steps your jurisdiction intends to take to make meaningful progress toward meeting its policy goals
- Assessing your current green electronics purchasing practices, including reviewing existing contracts to identify upcoming sustainable procurement opportunities; identifying renewal/bid dates and how contracts are developed (e.g., RFP, ITB, etc.); and
  conducting a spend analysis to determine volumes of both conventional and green electronics purchased;
- Adopting green electronics specifications and procedures that require compliance with sustainability specifications or standards (e.g., EPEAT and ENERGY STAR), or award points in the RFP process to vendors that offer more certified products, or products certified at a higher level;
- Addressing end-of-life management in your contracts including erasing data from equipment, donating usable equipment, using end-of-life services provided by vendors or manufacturers, and requiring vendors to track and report equipment's final destination;
- Establishing a paper reduction policy and procurement practices to save money and reduce waste;
- Purchasing ancillary IT products that offer environmental, health, and economic benefits such as toner and ink cartridges, power supplies, thumb drives and other storage devices, batteries, and other products that are needed to operate electronics; and
- Tracking and reporting results by calculating the dollar amount and percentage of electronics that meet their environmental specifications (e.g., EPEAT and ENERGY STAR).

Lessons Learned: The Electronic Product Environmental Assessment Tool (EPEAT) makes it easy for purchasers to evaluate, compare, and select desktops, notebooks, monitors, and imaging equipment based on their environmental attributes. EPEAT certification includes three increasingly stringent tiers of environmental performance: Bronze, Silver, and Gold. The ENERGY STAR standard for energy-efficient computers, is a required criterion in the EPEAT computer standard. EPEAT, which is managed by the Green Electronics Council, has a wealth of information for purchasers available on its website, including plug-and-play contract language, best practice guides, and too for calculating benefits attributable to EPEAT purchasing. The State Electronics Challenge (SEC), which is also available to local governments, is another resource can help you purchasing greener office equipment.

Using certified recyclers can help ensure your electronics are properly managed at their end of life. There are currently two accredited certification standards for electronics recyclers in the U.S.: e-Stewards Standard for Responsible Recycling and Reuse of Electronic Equipment (e-Stewards) and Responsible Recycling (R2) Practices (R2). Both advance best management practices; offer a way to assess the environmental, worker health, and security practices of entities managing used electronics; and are based on strong environmental standards that maximize reuse and recycling, minimize exposure to human health or the environment, ensure safe management of materials by downstream handlers, and require destruction of all data on used electronics.

Eliminating desktop printers and investing in multi-function devices (MFDs) that combine the tasks of printers, copiers, fax machines, and scanners into once machine can significantly lower costs for hardware, consumables (paper, ink and toner), electricity, and maintenance."

Chapter 9: Sustainable Procurement in Action: Vehicles and Fleet Maintenance Products

Local governments typically own a variety of vehicles such as passenger cars, transit buses, garbage trucks, and even boats and bicycles. They also purchase tires and other auto parts as well motor oil, vehicle washing chemicals, and fleet maintenance products. These products can result in serious environmental impacts including fuel and water consumption, greenhouse gas (GHG) and diesel tailpipe emissions, and exposure to a host of toxic chemicals including lead, mercury, and solvents.

Best practices for sustainable fleet procurement include:

- Creating a sustainable fleet team, policy, and detailed implementation plan;
- Conducting a baseline assessment of the municipal fleet to identify vehicles that are targets for retirement because they are relatively old or polluting;
- Downsizing the fleet and using car-sharing services to optimize the remaining vehicles;
- Purchasing replacement vehicles with high fuel efficiency and low emissions including hybrids and electric vehicles;
- Building an alternative fuel infrastructure for use by employees (and possibly members of the community);
- Pursuing strategies to reduce the upfront costs of sustainable fleet vehicles and infrastructure (e.g., cooperative purchasing, reverse auctions, and grants);
- Reducing diesel use and emissions by purchasing electric and hybrid heavy-duty vehicles, "renewable" diesel, and biodiesel;

- Purchasing equipment to reduce fuel use (e.g., GPS to optimize routes, telematics to track vehicle usage and driving behavior, anti-idling equipment, and telecommunications equipment to enable employees to meet remotely rather than drive to meetings);
- Adding bicycles (and bike-sharing services) to the fleet;
- Encouraging contractors to use sustainable fleet vehicles when delivering products or performing services for your municipality; and
- Purchasing environmentally preferable fleet maintenance products (e.g., re-refined motor oil, retread and low-rolling-resistance tires, copper-free brake pads, mercury-free lights, lead-free wheel weights, and certified low-toxicity cleaners and degreasers).

Lessons Learned: Car-sharing services cost significantly less per mile than owning an operating a fleet vehicle because it eliminates maintenance, repair, parking, and insurance costs.

An exciting new type of biodiesel product that is emerging in the market is "renewable" diesel, which is typically made from waste vegetable oil and animal fats. Unlike standard biodiesel, it can be used year-round and does not require retrofitting of a diesel engine before it can be used. A fast growing number of cities and counties are switching their entire diesel fleet to renewable biodiesel because it has significantly lower emissions of GHGs and other pollutants and is competitively priced. In addition, its use reduces maintenance costs because there is less vehicle downtime and filters need to be cleaned less often.

Chapter 10: Sustainable Procurement in Action: Green Building Supplies

Products such as paint, light bulbs, flooring, construction adhesives, and janitorial supplies can contribute disproportionately to a building's social, environmental, and economic footprint. Jurisdictions with policies requiring green building certifications (such as ENERGY STAR or LEED) must purchase sustainable building supplies in order to maintain certification for existing buildings. There are many reasons to purchase green building supplies, including: improving indoor air quality; cost savings and economic benefits from energy- and water-efficient products; and environmental benefits resulting from improved operational efficiency, reduced waste, and lowered emissions.

Best practices for buying green building supplies include:

- Creating an effective green building team that engages purchasing agents; members of your sustainability team; staff from infrastructure planning, design, and engineering groups; and facility maintenance staff;
- Adopting a green purchasing policy for municipal building supplies;
- Conducting an assessment of your jurisdiction's procurement practices for building equipment and supplies;
- Conducting a baseline assessment of your jurisdiction's current building supplies to identify strategic opportunities where sustainable purchasing practices can make a difference;
- Developing a green building supplies procurement plan to align your jurisdiction's procurement practices with existing government sustainability goals, such as reducing waste, energy consumption or GHG emissions;
- Identifying upcoming contract opportunities for green building products and services;
- Developing sustainability specifications and contracting strategies for high-spend/high-impact building materials, equipment, and supplies;
- Negotiating discounts for sustainable building materials, equipment, and supplies;

- Promoting contracts for green building materials, supplies, and services; and
- Tracking and reporting results, including cost savings and sustainability benefits, from your municipality's green building procurement initiatives.

Lessons Learned: Many local governments have focused their green building policies on improving the sustainability of their large building construction and renovation projects, but some cities and counties have gone further by adopting policies encouraging the purchase of energy-efficient and other sustainable products for the ongoing operation and maintenance of their facilities.

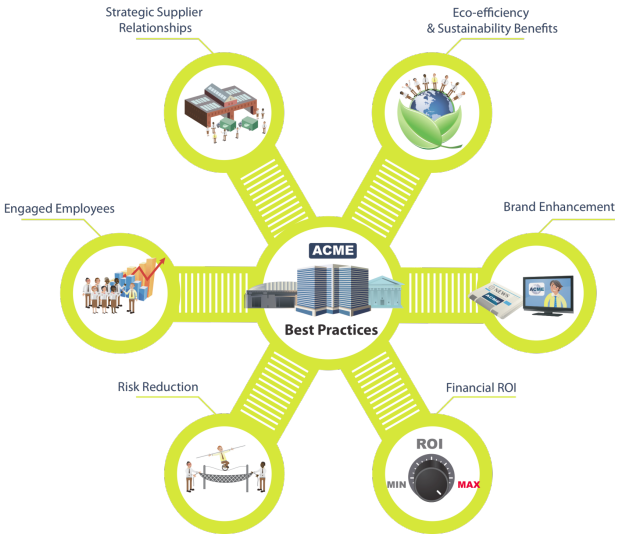
If earning LEED certification is one of your jurisdiction's sustainability goals, then you can look for product attribute alignments such as ENERGY STAR-certified appliances, or UL GREENGUARD Gold certified (low-emitting) materials that will earn LEED credits.

Your Green Building Team may also write into the contract a requirement that the vendor provide training sessions to your jurisdiction's maintenance staff at every facility. These training sessions should be designed to introduce maintenance staff to innovative green products while communicating the benefits of sustainable building supplies. Both the vendor and the staff should become familiar with the benefits of purchasing green building supplies, as well as the potential hazards associated with purchasing unsustainable products.

Chapter 2: Making the Business Case for Sustainable Procurement

This chapter answers the question, "Why sustainable purchasing?" Many people know that there are environmental benefits to purchasing greener and more responsibly-sourced goods and services, but there are also many other financial, governance, and socio-economic benefits to be gleaned. This chapter describes the business case for practicing sustainable purchasing, discusses potential costs and strategies for addressing these, and also delves into some approaches that can be used to obtain executive buy-in for your municipality's sustainable purchasing program.

THE CASE FOR SUSTAINABLE PURCHASING



The Value Proposition for Sustainable Purchasing

At first glance, sustainable purchasing might seem like a passing trend. Some municipalities may consider it to simply be a way to lead by example. The reality is that sustainable purchasing is much more than that. There stretch across the most important financial, governance, environmental, and socio-economic priorities that your municipality already has. In addition, sustainable purchasing *does not need to be a whole new way to purchase*. Many municipalities and other organizations are already undertaking efforts to optimize the way in which they procure goods and services: implementing sustainable purchasing can piggyback on these changes, or alternatively, may catalyze many other positive changes that increase the efficiency of the buying process, and the strategic value that purchasing departments provide within their municipalities – both internally and in a public-facing way.
Some of the most compelling benefits of sustainable purchasing are shown in the diagram to the left. It quickly becomes obvious that sustainable purchasing has the ability to deliver impact throughout your municipality.

This section discusses the benefits that municipalities can expect to gain from implementing an effective sustainable purchasing program, **environmental/health**, **social,** and **economic**.

ECONOMIC BENEFITS

Although there are potential resourcing requirements for implementing a sustainable purchasing program (these will be discussed later in this chapter), overall, there are strong financial incentives to sustainable purchasing. These benefits come to light in the form of cost savings – particularly when purchases of goods and services are evaluated using a **total cost of ownership**[1] approach – but also include less direct / more intangible financial benefits. We break down some of these below.

Cost Savings

Sustainable purchasing is helping many cities and counties save money, primarily because sustainable products such as, energy-efficient computers, hybrid electric vehicles, water-efficient toilets, and duplexing printers are often more resource-efficient. That means they require less electricity, fuel, water, paper, and other resources to operate.

Some products are considered environmentally preferable because they last longer than conventional products. Consequently, they can reduce replacement, installation, and waste disposal costs. Examples include LED light bulbs (which last approximately 40 times longer than traditional incandescent light bulbs), high-performance rechargeable batteries (which can replace hundreds of single-use alkaline batteries), and high-yield toner cartridges (which contain 2-3 times more ink than standard-yield cartridges).

The **City of Boston**, **MA,** which has replaced most of its mercury vapor street lights with LEDs, reported that this sustainable procurement initiative is saving the City $4.25 million annually in lower utility bills and conserving enough electricity to power 4000 homes.[2]

King County, WA saved more than $200,000 over a three-year period by purchasing copiers that can easily email documents and make two sided copies, which enabled it to cut its copy paper usage 20%.[3]

The City of Portland, OR lowered its trash and janitorial service fees by $1500/month by replacing paper towel dispensers with high-efficiency hand dryers in several buildings.

Some municipalities have been able to access grant funding or utility rebates to help support specific sustainable procurement initiatives.

The City of Palo Alto reported that having a green purchasing policy in place enabled them to qualify for, and subsequently receive, a $250,000 grant from the State of California.

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[1] Total cost of ownership is the cost of a good or service when all lifecycle costs are considered, including the costs from planning, acquisition, use, maintenance, and disposal. This term is used to distinguish total cost from the purchasing price.
[2] "Mayor Walsh Accelerates City's LED Streetlight Retrofit Program: Program Saves Money and is Greening Municipal Operations," Mayor's Press Release, October 21, 2014; **http://www.cityofboston.gov/news/Default.aspx?id=14839**
[3] *2013 Annual Report of King County's Climate Change, Energy, Green Building and Environmental Purchasing Programs,* June 2014, **http://your.kingcounty.gov/dnrp/climate/documents/2013-King-County-Sustainability-Report.pdf**

Eased Regulatory Burden

When jurisdictions choose products and services with less hazardous materials, or work with suppliers to change a process to reduce its environmental impact, they can avoid expenses and time spent on local permitting and time spent managing compliance issues.

ENVIRONMENTAL BENEFITS

Environmental benefits are the outcomes most traditionally associated with sustainable purchasing, and therefore, likely the most straightforward for colleagues to understand. Nonetheless, it is helpful to be able to demonstrate how sustainable purchasing can support your jurisdiction's own environmental sustainability goals. The environmental benefits associated with sustainable purchasing can be broadly broken down into local benefits (i.e., aspects most directly affecting the land, water, and air in and near your jurisdiction), and global benefits (i.e., aspects affecting the land, water, and air quality on a global scale). Several of these are discussed below.

Waste Reduction and Prevention

Resource efficient products and services do more with less. The quantity of materials and resources used in products can be significantly reduced through innovative design, the use of recycled or salvaged materials and the use of alternative fuels. When organizational inputs are reduced, there is automatically less waste output, and waste is also lessened by increased durability of products, and increased ability to reuse or recycle their components at the end of their useful life. Less waste not only translates to cost savings, but also to cleaner air and water for the community. It means less demand for municipal services (such as water treatment and garbage disposal) so that tax revenues are used more efficiently, and the capacity of existing treatment services is enhanced. This focus on efficiency of materials, resources and energy also creates a municipal culture of reduction, conservation and innovation, creating support for the circular economy. Up front decisions to improve material and resource efficiency of products and services can also help prevent waste in the first instance.

Vancouver, BC, Canada awarded a contract for managed print services to a vendor that responded to the City's request for proposals, the requirements of which included a Sustainability Plan that would address key sustainability-related goals including:

- Waste reduction (end of life disposition and consumables);
- Paper reduction;
- Reducing energy consumption; and
- Use of eco-certified print devices to deliver service

Reduction of Toxic Chemical Exposures and Pollution

Many products purchased by local governments contain materials and chemicals that can cause serious health effects to humans and damage to ecosystems. At the point of use, there are impacts on indoor and outdoor air quality, as well as the health of waterways where hazardous materials can end up. Below are some examples:

- Chemicals that are used to clean and disinfect the offices of restrooms – such as chlorine bleach and ammonia – can cause asthma.

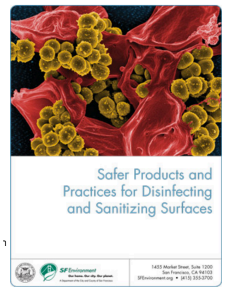
- Formaldehyde, which can off-gas from furniture, cabinets and flooring, is a known human carcinogen.
- Rock salt ice-melting chemicals can increase the salinity of freshwater ecosystems, harming both plants and wildlife, and causing a signification amount of corrosion damage to bridges and other transportation infrastructure.
- Some types of insecticides – notably neonicotinoids – have been implicated as one cause of bee colony declines.

Sustainable purchasing of certified low-toxicity cleaning products, laundry and dish detergents, hand soaps, paints and other products can reduce the use of, exposures to, and releases of toxic chemicals, safeguarding human health and the environment where products are manufactured, used, and disposed of at the end of their useful life.

The City of San Francisco has implemented a comprehensive green cleaning program in order to protect its employees and other users of its facilities in compliance with its Precautionary Purchasing Policy. The City has specified and procured a wide array of certified low-toxicity cleaning products, hand soaps, and building maintenance chemicals. To support this program, the City also:

- Created a series of green cleaning training videos that have been provided to the City's custodial staff as well as to numerous janitorial service companies in San Francisco;

- Commissioned RPN and the Pesticide Research Institute to conduct a report on ***Safer Products and Practices for Disinfecting and Sanitizing Surfaces*** in order to identify healthier alternatives to bleach and other disinfectants that are known to contain chemicals that can cause asthma and other serious health hazards; and
- Helped San Francisco Unified School District to pilot test and transition to using certified low-toxicity cleaners and asthma-safe disinfectants.



Resource Conservation

Sustainable purchasing reduces resource use by encouraging the use of recycled, second-hand, renewable, reusable, refillable, and salvaged materials, and by being more resource efficiency with natural resources and new materials. This efficiency helps with many conservation activities, including:

- Water conservation and the protection of water quality
- Conservation of non-renewable resources (e.g., petroleum)
- Support for sustainable forestry practices
- Protection of biodiversity

Reduced Greenhouse Gas Emissions

Related to the reduction of resources used, but specifically important to global-scale climate protection, is the reduced volume of greenhouse gas (GHG) emissions that can arise from sustainable purchasing. GHG emissions are minimized throughout the product or service's lifecycle, thus safeguarding against further climate change.

Alameda County, CA undertook a countywide interior lighting retrofit that reduced its annual energy use by 3 million kWh, saving $350,000 and shrinking its carbon footprint by 1.6 million pounds.

SOCIAL BENEFITS

Sustainable purchasing practices provide many benefits for a municipality's employees, the economy, and the community. Sustainable products and services benefit the economy by providing local economic growth and creating economic opportunity for vulnerable populations. They also promote healthy lifestyles, help resource social programs, support fair wages and healthy work practices and improve socio-economic conditions in the developing world.

Improved Wage Levels and Working Conditions & the Advancement of Human Rights

Sustainability purchasing supports the implementation of international labor standards resulting in better working and environmental conditions and fair wages for workers domestically and in less developed countries. Setting high standards for suppliers helps organizations safeguard against risk, align with their ethical values and ensure safe and productive working environments for employees while advancing human rights globally.

Stronger Local Economy

A common sustainable purchasing is to support local businesses, thereby increasing local tax revenues and civic infrastructure, local jobs, local economic diversification and enhanced community resilience, while reducing the environmental impacts of shipping goods long distances. Buying from local firms keeps money circulating in the local economy, and promotes sustainable employment in your jurisdiction.

Sustainable purchasing also often includes efforts to purchase goods and services from social enterprises and cooperatives that train and hire vulnerable populations, including people with disabilities and the chronically un- or under-employed. These efforts will result in reduced homelessness, child and family poverty, and reduced need for public expenditures, as well as improved quality of life for disadvantaged individuals. Sustainable purchasing also promotes economic and benefit-sharing with Indigenous peoples and visible minorities, raising the overall level of community well-being.

The City of Edmonton, AB, Canada contributed 25% of the financing to create an innovative recycling facility that collects waste paper and linen (100% cotton materials) products from City offices, residents and hotels and achieves "closed-loop recycling" by processing it into recycled paper products for sale back to the City and other clients. At full capacity, 100 jobs were created at the facility. More than 100 local companies are now providing paper and used cotton fabric (e.g., clothing and sheets) to the facility and have also committed to 'joining the loop' by purchasing products from Greys. The City is receiving a share of the profits.

King County, WA saves over $500,000 every year by using remanufactured toner cartridges and supports local business by doing so.

Market Development for Sustainable Products and Services

A commitment to sustainable purchasing can help spur the growth of sustainable technologies and businesses, thereby advancing a sustainability marketplace and economy, including the creation of local "green" jobs. It promotes sustainable product innovation, and enhances access to sustainable products by reducing price premiums where they exist. In addition, sustainable purchasing supports and promotes the use of third-party certification programs, enhancing supply chain transparency and access to information about the origins and qualities of products and services.

The City of Chicago used its purchasing power to negotiate a new coal-free electricity contract that is projected to save City facilities $1.2 million over two years and reduce greenhouse gas emissions equal to removing over 220,000 cars from the road.[4]

LEADING BY EXAMPLE

The benefits of sustainable purchasing also arise from the leadership role that your jurisdiction adopts by changing the way in which you purchase.

Demonstrated Alignment with Organizational Goals and Values

Sustainable purchasing is a tool to help jurisdictions align their purchasing with their sustainability values and commitments. It facilitates compliance with existing sustainability policies and directives, and helps jurisdictions to achieve measureable progress toward their sustainability goals. Values and goal alignment with purchasing policies and other operational procedures reduces internal tension, enhances stakeholder support, builds citizen loyalty, and helps to attract quality employees.

Reduced Business Risk

There is growing pressure for municipalities to understand and act on a widening range of risks across their operations, including those in the supply chain. Proactive management of a jurisdiction's supply chain helps prevent accidents, spills, and climate change risks, while securing supplies (particularly where volatile natural resources are concerned), reducing liability, and avoiding potential damage to reputation. Increasingly, there are also very public concerns about access to basic resources, such as water, and sustainable purchasing can help to manage these risks. As your jurisdiction strives to align their purchasing with their organizational values, you may wish to ensure that your suppliers are compliant with international norms regarding human rights, corruption and bribery, country of origin, working conditions, child, forced, and sweatshop labor, and the environment.

Enhanced Brand and Image

Sustainable purchasing can also have benefits through enhancing image of your municipality. A jurisdiction can earn a reputation as a "green" or socially responsible municipality as a result of its sourcing policies, and the reverse is also true. A jurisdiction with an active sustainability purchasing program can better back up its claims to be a socially responsible jurisdiction than one without such a program, and this is highly important to obtaining buy-in from citizens, particularly as sustainability

[4] City of Chicago "Mayor Emanuel Announces New Electric Bill Savings for Chicagoans" Mayor's Press Office, March 9, 2014 **http://www.cityofchicago.org/city/en/depts/mayor/press_room/press_releases/2014/mar/mayor-emanuel-announces-new-electric-bill-savings-for-chicagoans.html**

initiatives are rolled out in the community. It may also allow your jurisdiction to be recognized farther afield by qualifying you for sustainability awards. Sustainable purchasing helps to position your municipality as a forward-thinking, vibrant, and sustainable location, attracting a strong community of residents.

Engaged Employees and More Effective Human Resources Management

Sustainable purchasing is a way for a municipality to show their commitment to their stated sustainability values and goals. When a jurisdiction is "walking the talk," employees feel more engaged, enhancing energy and productivity in the workplace. Both employees and the organization benefit from an atmosphere that supports good employee health and productivity. Aligning actions with a jurisdiction's mission, vision and values also helps to attract and retain top-tier employees.

Addressing Concerns & Criticism

Many municipal decision-makers are very receptive to the benefits that buying sustainable goods and services has to offer; however, they have some concerns that must be addressed before they are ready to fully support the implementation of a municipal sustainable purchasing program.

Some concerns are valid: there are potential costs and resourcing requirements to implementing an effective sustainable purchasing program, particularly when it's at an early stage. Fortunately, the benefits often outweigh the initial costs, and there are also some ways to mitigate these costs, which we will talk about in this section.

Many of these concerns fall into the category of preconceived notions or myths and these can be quite easily dispelled (see our Myths and Reality table below).

DEBUNKING SUSTAINABLE PROCUREMENT MYTHS

Sustainable buying practices and the marketplace for more sustainable 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. This table presents a few of the more common myths and discusses the reality of the situation.

Myth	Reality
It is going to cost more to buy more sustainable goods and services.	In many cases, purchasing sustainable products or services 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 other cases, costs are still significantly higher, e.g. for some electric vehicles, often because the marketplace is not as developed yet. However, when you consider the **lifecycle** or **total cost of ownership** of a product or service, the more sustainable choice 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. For example, green cleaning products made of ultra-concentrated formulas are less expensive on a per-gallon basis. In some cases, avoiding substantial environmental risks and mitigation costs in the future can

	also justify a higher purchasing price.
Sustainable products and services are not as effective.	These days, it is very rarely the case that a sustainable product or service doesn't perform just as well as a traditional product. Most of the time, sustainable products meet the quality specifications as their non-green counterparts and may actually provide superior performance. 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.
There are not enough sustainable products and services available.	The market for sustainable products has exploded in the last decade. In some product categories, there is a significant number of sustainable options, which makes it likely that municipalities will received competitive bids if the sustainable attribute is required. For example, when considering appliances, there is a wide variety of dishwashers, clothes washers, refrigerators and freezers with an ENERGY STAR certification.
Sustainable procurement will take too much time.	Initially, sustainable purchasing does require some time investment to develop a policy framework, implement sustainability into the procurement process, and educate purchasing staff on how to consider sustainability issues when developing and evaluating purchasing requirements. However, tools to help integrate sustainability into each type of procurement your jurisdiction practices are available and can be adapted to your specific needs. Especially in the case of government contracts, there is typically sufficient time during the bid solicitation process to address sustainability risks and opportunities that might apply to a product or service category. In the case of smaller-scale purchases, it doesn't take long to become familiar with some of the common environmental certifications like ENERGY STAR, Green Seal, and UL EcoLogo and look for these eco-labels as you consider different product options, or to have other simple considerations around avoiding toxins or reducing packaging. In addition, the more that sustainable purchasing is practiced and integrated into your jurisdiction's purchasing process, the less extra time it requires.
Our transportation emissions void the benefits.	Regardless of what type of product you buy (green or not) transportation emissions cannot be avoided. 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. However, sustainable purchasing often incorporates efforts to purchase from the local economy, where possible in terms of availability and trade restrictions. Thus, sustainable purchasing might *decrease* the transportation emissions that your purchasing requires.

The Benefits of Buying Less Stuff

Although it may seem obvious, it is important to note that the most sustainable purchase is typically one that is not made at all. Therefore, one way to ensure costs are minimized is by engaging in **acquisition planning**: determining whether a purchase is truly needed, and if it is, evaluating alternatives to identify those that will result in both cost savings and environmental benefits.

Below are several sustainable procurement strategies that local governments have successfully used to reduce their environmental footprint while saving money by reducing their consumption of products:

1. Installing **water bottle refill stations** in public facilities can minimize the need for bottled water ;

2. Negotiating contracts for **car-sharing services** can enable municipalities to downsize their fleet and cost less-per-mile to operate and maintain;

3. Investing in high-performance **rechargeable batteries** can eliminate the need for hundreds and even thousands of single-use alkaline batteries;

4. Purchasing networked **mutli-function devices (MFDs)** can help municipalities eliminate a significant number desktop printers, scanners and fax machines;

5. Specifying **printers and copiers that can automatically scan documents to email and make double-side copies** can significantly reduce paper consumption;

6. Choosing **high-yield toner and ink cartridges,** which last two-to-three times longer than standard-yield cartridges and cost less on a per-page basis, can prevent cartridge waste and manufacturing impacts;

7. Installing **high-efficiency hand dryers** can substantially reduce paper towel consumption and disposal impacts; and

8. Purchasing **LED light bulbs**, which reduce replacement, maintenance and disposal costs because they "last 35 to 50 times longer than incandescent light bulb and about 2 to 5 times longer than compact fluorescent lamps (CFLs).[5]

POTENTIAL COSTS OF SUSTAINBLE PROCUREMENT AND HOW TO MITIGATE THEM

The following table identifies some common potential costs to sustainable purchasing and discusses how they might be mitigated. For those purchases that are necessary, the following table provides some guidance for how costs can be minimized.

[5] ENERGY STAR Program, *Why Choose ENERGY STAR Qualified LED Lighting*, webpage accessed August 15, 2016; **https://www.energystar.gov/products/lighting_fans/light_fixtures/why_choose_energy_star_qualified_led_lighting**

Cost	Successful Sustainable Procurement Strategies
Time to conduct product research, determining which environmental, health and social attributes are most important to address in your specifications (e.g., energy efficiency, recycled content, toxic chemicals, etc.); how to prevent green washing and evaluate sustainability claims in the bid evaluation process	• Use model product specifications that address environmental and social issues that have been develop by other public agencies that are leaders in the field • Follow guidance provided by organizations such as the Responsible Purchasing Network, the Green Electronics Council, or the Sustainable Purchasing Leadership Council. • Look for products that have been certified as environmentally preferable or socially responsible by a credible third-party organization such as Green Seal, UL (EcoLogo or GREENGUARD), US EPA (ENERGY STAR, WaterSense or Safer Choice), Cradle to Cradle Innovation Institute, Fairtrade USA, Forest Stewardship Council, etc. (See full list of credible third-party certifications in Appendix _.) If certified products are not available, consider products with meaningful claims such as compliance with the US EPA's minimum recycled content guidelines or stringent VOC limits. • Visit sustainability trade fairs to check out new products all in one place • Collaborate with other purchasers to share information and cost-share research and contract development • Require bidders to submit documentation about the sustainability attributes of their products and services with their bids or in a formal "request for information" • Piggyback on a "green" contract that has been developed by another municipality, your state procurement office, or a cooperative purchasing organization so that someone else will do the work for you. • Consider hiring staff or a consultant to help you develop RFP documents and evaluate bids for environmentally preferable goods and service, conduct training, etc. Or join an organization that offers sustainable procurement technical support to its members.

Cost	Successful Sustainable Procurement Strategies
Cost premium: initial higher cost of some sustainable products and services	• Aggregate demand by putting sustainable products on multi-departmental contracts rather than buying them via decentralized purchasing methods • Look for opportunities to purchase sustainable products from the State that you are in or through cooperative purchasing organizations that have already negotiated discounts – Include Your Sustainability Requirements in a Participating Agreement • Develop contracts cooperatively with neighboring jurisdictions or the school district to reduce costs through volume purchasing • Assess the total cost of ownership (TCO) to identify products and services that have a relatively short payback • List sustainable products on your "core" or market basket list to encourage bidders to offer their highest discounts on these items • Use a "budget envelope" approach, whereby cost savings in one area resulting from sustainable purchasing (e.g., reduced utility costs) are applied to offset the cost premium in another area • Seek local or national grants or incentive programs that provide financial benefits for buying sustainable products such as electric vehicles
Time/effort spent on securing support from executives, and end-users; overcome resistance to change	• Build on success: start where you know there is proven success with other organizations, win some support with key management and end-users, and go from there • Focus on sustainable procurement initiatives that are likely to yield measurable sustainable benefits that align with your jurisdiction's sustainability commitments as well as those that can yield cost savings • Use the information and case studies presented in this *Playbook* to help illustrate and quantify the benefits of sustainable purchasing • Highlight examples of other municipalities (or entities within your jurisdiction) that have been successful • Encourage end-users to share their successes with others • Seek awards of other types of recognition for your efforts • Learn from others: join a purchasing network or collaborative

Cost	Successful Sustainable Procurement Strategies
Conflicting and confusing information, lack of clear definitions, insufficient information	• Learn from others: join a purchasing network or collaborative • Let someone else do the work: buy products with environmental or social certification wherever possible. Third-party certified is best (e.g. Green Seal, ENERGY STAR, Fairtrade), but you may also choose industry-certified (e.g. certification from a local utility)
Educating other internal purchasers	• Learn from others: join a purchasing network or collaborative • Explanation/assistance, personal visits • Invest in an education and training program for internal staff
Educating External Suppliers	• Work collaboratively on these issues with other purchasers • Learn from others: join a purchasing network or collaborative • Personal visits • Create a Supplier Code of Conduct and use it as a tool to educate vendors about expectations • Partner with NGOs to gain information about local conditions, governments, changes in legislation, cultural issues

OBTAINING BUY-IN: HOW TO GET DECISION-MAKERS ON BOARD

Municipalities don't necessarily wish to practice sustainable purchasing for its own sake, but rather they want the benefits that come from purchasing goods that are more environmentally, socially, and ethically responsible. Therefore, the crux is in helping decision makers to understand how sustainable purchasing will advance priorities that are already important to your jurisdiction.

In order to go beyond one-off efforts and begin to implement an effective sustainable purchasing program, it is critical that you have one or a few **executive champions** that will act as ambassadors for sustainable purchasing amongst government management, as well as sponsor the work so that it receives the attention it requires. This section presents some strategies that can help you with obtaining buy-in from executive champions to move your sustainable purchasing program ahead.

Step 1: Tailor the Business Case to Your Municipality

Use the information and case studies presented in this chapter and the rest of the Playbook, to detail a compelling case for how sustainable purchasing supports your jurisdiction's existing strategic priorities and aligns with your organizational values. Which of your municipality's existing goals might you meet or contribute to by profiting from the benefits that sustainable purchasing has to offer? Be sure to also consider the potential costs involved, and how they might be managed (as presented above).

Step 2: Collect Your Own Stories

It is very likely that you are already considering sustainability some or much of the time when you're practicing purchasing for your jurisdiction. Look through purchases you have made in the past year or

two, or ask around to find out if there are any good examples of having considered environmental, socio-economic, or ethical factors when purchasing a good or service. What were the outcomes of this purchase? Positive examples provide strong support for expanding this type of purchasing, and examples that may have turned out less well will have provided you with learnings and experience that you can bring forward. Either way, documenting these past sustainable purchases is an effective way to demonstrate that sustainable purchasing is simply a more strategic way to buy within your existing procurement process.

Step 3: Have the Conversation

Present your business case to relevant executives and/or policy-makers who might act as sponsors for moving the sustainable purchasing program ahead. Try to do this by scheduling a face-to-face meeting or by making a formal presentation. If you have to highlight the environmental, health and economic you are more likely to gain interest in moving forward with creating a policy and program. In addition, it is important to communicate that implementing sustainable purchasing is not something that will be done overnight and **you won't need to do it all right away**: it has to be thought of as a three- to five-year journey to integrate sustainability into your jurisdiction's normal purchasing processes.

It can take some effort to recruit green champions and get decision-makers on board with sustainable purchasing, but once you are able to gain some initial support, conducting a few **pilot sustainable purchases** is a great way to demonstrate that sustainable purchasing is nothing to be intimidated by, and that it can in fact contribute greatly toward realizing your municipality's strategic goals.

When the **City of Calgary, AB, Canada** began to implement its Sustainable Environmental and Ethical Procurement Policy (SEEPP) and program, it began by piloting its new way of buying and, using the results of their pilots, prepared a cost impact summary table in its report to the City Council, in order to address concerns about potential cost increases from sustainable purchasing. The City found that, "the costs associated with the continued implementation of the policy appear to be minimal. However, the team will continue to monitor costs on an ongoing basis and where there are significant increases or implications, they will be addressed on a case-by-case basis." Calgary's evidence-based reporting approach resulted in obtaining Council approval for continuation of its policy.

Chapter 3: Developing a Sustainable Procurement Policy

This chapter showcases sustainable procurement policies adopted by USDN members, explains why a sustainable procurement policy is an essential element of an effective sustainable procurement program, and recommends eight best practices for cities and counties to follow when formulating a sustainable procurement policy. It also summarizes the various types of policy vehicles such as laws and executive orders, discusses category- and product-specific sustainable procurement policies, and presents a model sustainable procurement policy that local governments can adopt as-is or tailor to meet their needs.

WHY SHOULD CITIES AND COUNTIES ADOPT SUSTAINABLE PROCUREMENT POLICIES

A sustainable procurement policy is an important – and relatively easy – way for a local governments to improve the sustainability of its operations through the products and services it buys. While some progress can be made on sustainable purchasing activities in the absence of a policy, there are many good reasons to invest in the process of creating one. These include:

- Sending a signal – internally and externally – that sustainable purchasing is important to the jurisdiction by articulating its commitment to "leading by example."
- Stimulating discussions about the scope and design of the jurisdiction's sustainable procurement program and how it supports the jurisdiction's sustainability goals.
- Creating the necessary infrastructure for an effective sustainable procurement program including the establishment of an interagency sustainable procurement committee or program lead, a planning process, a system for developing specifications and procedures, and reporting requirements.
- Supporting internal champions who have been undertaking sustainable procurement activities on their own without formal guidance.
- Providing specific guidance to purchasing agents and vendors about the jurisdiction's sustainable procurement policies and procedures.
- Facilitating the design of a sustainable purchasing program that supports the jurisdiction's compliance with federal, state, or provincial laws.

- Examples of federal laws that may influence municipal procurement include the *Clean Air Act* in the U.S. and the *Clean Air and Climate Change Act* in Canada (which may promote the use of less-polluting vehicles) and the *Clean Water Act* in the U.S. and the *Canada Water Act* and the *International Rivers Improvement Act* in Canada (which may require municipalities to reduce discharges of mercury or other chemicals of concern into water supplies).

- The use of some federal, state or provincial funds may require jurisdictions to purchase recycled-content or other sustainable goods and services.

- State or provincial laws may similarly influence municipal procurement, but are likely to vary by state or province. Examples include laws promoting product stewardship for electronic equipment, mercury-containing light bulbs, or other products.

- Helping local governments qualify for environmental awards (such as LEED status from the Green Building Council) as well as grants from state or provincial agencies and other entities. For example, **San Jose, California** reported that the adoption of its environmentally preferable procurement policy (EP3) enabled the City to seek recycling-related grants from the State of California, "which requires a formal recycled content procurement policy and a report on its implementation for grant eligibility."[6]

TYPES OF SUSTAINABLE PROCUREMENT POLICY VEHICLES

Local governments can utilize a variety of policy vehicles to establish their sustainable procurement policy. The options include, but are not limited to: local laws, ordinances, and resolutions; mayoral or county executive orders; and administrative directives or guidance documents. Each of these policy vehicles has advantages and disadvantages, which are discussed below.

Local Laws, Ordinances, and Resolutions

Many local governments have adopted sustainable procurement policies through laws, ordinances, and resolutions via their legislative bodies (e.g., city councils, county legislatures, etc.). The advantage of laws and ordinances is that they often have "force of law" and will usually remain in effect despite changes in administration – unless they are rescinded, amended, or allowed to sunset. Their permanence can also be a drawback since it can take a significant amount of effort to change them if they need to be updated.

Legislative bodies sometimes enact resolutions. While they can signal support for a policy, their language may not be as strong and they may not be enforceable. Resolutions are sometimes used to approve the creation of a formal policy, which is subsequently developed either by the same legislative body or another government entity.

Additionally, some local laws extend beyond the operations of government to include vendors and contractors. For example, over 100 municipalities have adopted policies banning the use of polystyrene

[6] City of San Jose, California, *Environmentally Preferable Procurement Policy (EP3)*, April 24, 2012, **http://www.sanjoseca.gov/documentcenter/view/3862**.

food service ware. Many of those laws include provisions that apply not only to the procurement of food service ware products by the municipality but also to contractors that provide food services to the municipality.

Executive Orders

Executive orders demonstrate a mayor or county executive's commitment to purchasing environmentally preferable and/or socially responsible goods and services, and can give a boost of top-level support to a new or existing sustainable procurement program. The downside of an executive order is that it may not be fully promoted or implemented by future administrations.

Administrative Directives and Guidance Documents

City managers or the heads of purchasing departments typically issue procurement administrative directives and guidance documents. One of the strengths of incorporating a sustainable procurement policy overall procurement guidance is that it is likely to remain in place despite any changes in administration. At the same time, not having a stand-alone sustainable procurement policy may make it less likely that employees will utilize it because they may have to wade through a long list of policies and guidelines to find the sections that apply to sustainability.

OTHER OPPORTUNITIES NOT TO MISS

The most effective way to incorporate sustainable purchasing into your jurisdiction's processes is to create a sustainable purchasing policy through one of the methods above. However, there is certainly much work that can be done in the absence of a policy, or while one is in development. Additionally, there are many opportunities to reinforce and strengthen a policy after it's established. Adding sustainable procurement language to sustainability plans, climate action plans, and zero waste plans can bolster a jurisdiction's sustainable purchasing efforts, no matter where they are in the process of developing a policy.

Sustainability Plans

Many USDN member cities and counties have developed a sustainability plan. Such plans lay out a vision for improving the environmental, social, and financial sustainability of the community. Sustainable procurement can be included as one strategy for helping the municipality to meet its sustainability goals.

Climate Action Plans

While local Climate Action Plans typically present a wide-array of strategies aimed at shrinking the carbon footprint of an entire jurisdiction (not just that of municipal facilities), some contain language designed to help the jurisdiction meet its climate protection goals in part through the procurement of climate-friendly goods and services.

Zero Waste Plans

Zero waste plans focus on diverting waste from landfills through waste reduction and increasing recycling and composting rates. Including provisions that support the purchase of products and services that reduce waste can help advance zero waste goals.

BEST PRACTICES

The Responsible Purchasing Network (RPN) evaluated the sustainable procurement policies of dozens of USDN members (i.e., cities and counties), including many that are leaders in this field. RPN examined each policy's goals, scope, procedures, standard development process, requirements for educating employees, tracking activities and impacts, and methods for maintaining up-to-date policy guidance, standards, and specifications.

By conducting this review, RPN identified eight sustainable procurement "best practices," which are detailed below. This *Playbook* highlights sustainable procurement policy language that can support an effective, robust sustainable procurement by USDN members and other municipal governments.

Best Practice #1

The policy addresses the three pillars of sustainability: environmental, social, and economic.

Many modern sustainable procurement policies have expanded their scope to address social responsibility and economic equity in addition to environmental stewardship. This is often referred to as the "triple bottom line" or the "three pillars of sustainability." This is not only consistent with many municipalities' overall sustainability policy, but also can help build multi-stakeholder support for the policy's implementation.

Ideally, the policy should direct purchasers to evaluate both the attributes of the product or service itself as well as the vendor's own operations, including their labor and supply chain practices. Examples of policies that incorporate the three pillars of sustainability include:

- **Portland, Oregon's** *Sustainable Procurement Policy* states the following: "The City of Portland recognizes its responsibility to minimize negative impacts on human health and the environment while supporting a diverse, equitable and vibrant community and economy. The City recognizes that the types of products and services the City buys have inherent social, human health, environmental and economic impacts, and that the City should make procurement decisions that embody the City's commitment to sustainability."[7]

- **Seattle, Washington's** *Sustainable Purchasing Policy* includes similar sustainability goals: "The City shall acquire its goods and services in a manner that integrates fiscal responsibility, social equity, women and minority business opportunity, and environmental stewardship." The City's policy also spells out the "social equity factors" that purchasers must consider in addition to environmental sustainability. These include:

    - *Women and minority business opportunity and participation*
    - *Fair labor practices, health and retirement benefits, safety, livable wages, and worker rights*

[7] City of Portland, Oregon, *Sustainable Purchasing Policy*, September 2010; http://www.portlandonline.com/shared/cfm/image.cfm?id=204110.

- *International Fair Labor Code of Conduct, including prohibitions on forced overtime, child labor and health and safety equal to the laws of the country of the manufacturer*
- *Human health impacts*
- *Environmental justice (disproportionate environmental and health impacts on different population groups).*[8]

- **Edmonton, Alberta's** *Sustainable Purchasing Policy* references the three pillars recognized within the City's sustainability goals: "The purpose of this policy is to align the City of Edmonton's purchasing practices with its goals of environmental, social, and economic sustainability."[9]

Best Practice #2

The policy clearly delineates the jurisdiction's staff roles and responsibilities in carrying out the goals and requirements of the sustainable purchasing policy.

Many sustainable procurement policies state that some or all departments (or employees) are responsible for carrying it out. However, a sustainable procurement policy is stronger if it assigns specific tasks to staff or departments and includes guidance on how everyone will work together. Such provisions include identifying which agencies will be responsible for developing sustainability criteria for the bid selection process, prioritizing and planning the municipality's sustainable procurement activities, educating and training employees and vendors, etc.

Examples of policies that clearly define the roles and responsibilities of departments in carrying out policy requirements include:

- **Portland, Oregon's** *Sustainable Procurement Policy* devotes an entire section to implementation, outlining the responsibilities of City Bureau Directors, the Chief Procurement Officer, the Director of the Bureau of Planning and Sustainability, and City employees. For example, some of the tasks City Bureau Directors are accountable for include : a) ensuring staff utilize sustainable procurement standards and best practices; b) ensuring that contracting manuals and specifications reference sustainable procurement standards and best practices; c) building awareness of the City's policy and sustainable procurement standards among City staff; and d) gathering information needed to track, report, and evaluate the City's sustainable procurement activities.[10]

- **Seattle, Washington's** *Sustainable Purchasing Policy* details the "acquisition responsibilities" of the City's purchasing agency (Department of Executive Administration), the

[8] City of Seattle, Washington, *Sustainable Purchasing Policy,* August 11, 2008, **http://www.seattle.gov/Documents/Departments/FAS/PurchasingAndContracting/Purchasing/green_SustainablePurchasingPolicy.pdf**

[9] City of Edmonton, Alberta, *Sustainable Purchasing Policy*, February 3, 2010, **http://www.edmonton.ca/business_economy/documents/PDF/C556.pdf**

[10] City of Portland, Oregon, *Sustainable Procurement Policy*, September 2010, **http://www.portlandonline.com/shared/cfm/image.cfm?id=204110**

Office of Sustainability and Environment, Seattle Public Utilities, and other City departments, which are directed to establish a Green Team to "advise, strategize and promote environmental purchasing." Some of the responsibilities of the Green Team are to "disseminate information to City staff about sustainability standards and environmentally preferable practices and strategies" and "participate in user groups…to test and discuss new products."[11]

- **Denver, Colorado's** *Environmentally Preferable Purchasing* (EPP) executive order spells out specific roles for the Purchasing Division of General Services (as the lead agency:
    - Providing guidance to all City agencies on EPP requirements, processes and strategies;
    - Providing training to buyers
    - Including standard EPP language in all formal solicitations and updating as necessary
    - Assisting agencies in developing product and service specifications that meet the requirements of the City's EPP Program
    - Where appropriate, ensuring that EPP criteria are included in product or service evaluations
    - Tracking and reporting annually on the City's EPP program
    - Communicating the City's EPP program to all agencies

  Denver's EPP policy, which is a subset of the City's broader sustainability policy, also specifies the roles and responsibilities of other City agencies to implement the EPP policy:
    - Working with the Purchasing Division to advance the goals of the City's EPP Program
    - Clearly and accurately communicating environmental goals and requirements in all request to purchase documents and formal solicitations, wherever appropriate
    - Including EPP considerations in initial needs assessment for product and service procurement
    - Identifying and pursuing opportunities to reduce overall consumption
    - Assessing whether or not a product or service is necessary prior to starting the procurement process
    - Assessing the Total Cost of Ownership by including initial cost, operating costs, and disposal or end of life cost, with due consideration for leasing as an alternative to outright purchase
    - Selecting environmentally preferable products and services when available on the City's contracts or Master Purchase Orders over conventional products provided they meet the required performance standards
    - Seeking products where claimed environmental performance has been certified or rated by an independent, reliable third party entity
    - Working with vendors to advance the environmental performance of goods and services and recognizing vendor who do the same
    - Participating in Purchasing Division pilots of new and innovative environmentally preferable products and services as they become available.[12]

[11] City of Seattle, Washington, *Sustainable Purchasing Policy*, August 11, 2008, **http://seattle.gov/purchasing/GrnPurchPolicies.htm**.
[12] City of Denver, Executive Order 123, Environmentally Preferable Purchasing, March 11, 2013; **https://www.denvergov.org/Portals/728/documents/NDCC/NWSS%20RFQ%20Executive%20Order%20123.pdf**

Best Practice #3

The policy directs the jurisdiction to develop (and periodically update) sustainable procurement tools including model specifications and vendor survey questions for its employees to use.

Because purchasing agents and other municipal staff often lack expertise in environmental issues, it can be difficult and time-consuming for them to determine when and how to develop sustainability specifications to guide their many, varied purchasing decisions. Having the policy call for the development of a sustainable procurement checklist or handbook that identifies credible certifications and for designated products and services takes the onus off buyers in the central purchasing office or individual departments to interpret the policy and develop these on their own. It also creates institutional memory so that best practices can be continued despite staff turnover. By doing so, the decision-making processes is streamlined and standardized to support the policy.

Many municipalities encourage their purchasing agents to utilize credible third-party certifications to prevent the procurement of products and services that have unsubstantiated or false claims. This is more useful than including vague language stating that products should be made with recycled content or be energy efficient. Examples of polices that direct purchasers to use third-party certifications include:

How prescriptive should our policy be?
Early green purchasing policies were often more prescriptive because they were narrow in scope. For example, it may have specified an exact percentage of recycled content when purchasing copy paper products. As the market has evolved, the best practice is now to keep the policy language more general in order to leave room for innovation. Instead of including standards in the policy, the policy should direct the jurisdiction to develop tools and procedures – including standards and specifications – that are more easily adaptable to a changing marketplace for sustainable goods and services.

- **Raleigh, North Carolina's** *Sustainable Procurement Policy* directs its Purchasing Division and other City departments to "apply the most stringent third-party label standard available for a product or service being acquired." It further states that the City "shall use independent, third party social and/or environmental (eco) product or service label certifications when writing specifications for procuring materials, products or services, whenever a responsible label is available."[13]

- **Alameda County, California's** *Environmentally Preferable Purchasing Policy* authorizes its employees to "utilize eco-labels established by independent and widely recognized authorities; or standards or specifications developed by other governmental or non-governmental organizations that are determined to be meaningful and effective by Alameda County."[14]

[13] City of Raleigh, North Carolina, *Sustainable Procurement Policy*, November 4, 2011, http://www.raleighnc.gov/environment/content/AdminServSustain/Articles/SustainabilityReport.html (See link to Raleigh's Sustainable Procurement Policy on this webpage).
[14] Alameda County, *Environmentally Preferable Purchasing Policy,* March 7, 2011, http://www.acgov.org/sustain/what/purchasing/policy.htm

Some local governments go a step further by including approved standards and certifications in the policies themselves. Commonly accepted standards include minimum recycled-content requirements developed by the US EPA – called comprehensive procurement guidelines (CPGs), ENERGY STAR certification, and other third-party certifications developed by organizations such as Green Seal or the Forest Stewardship Council (FSC).

Below are several examples of policies that list specific sustainability requirements that products and services must meet if purchased by employees.

- **San Antonio, Texas'** *Environmentally Preferred Purchasing Policy* states that "preferred products will be purchased using the guidance and certification of the following organizations:
    - United States Environmental Protection Agency (USEPA)
    - Green Seal
    - Energy Star
    - United States Department of Agriculture (USDA)
    - Electronic Products Environmental Assessment Tool (EPEAT)
    - Forest Stewardship Council (FSC)"[15]

- **San Jose, California's** *Environmentally Preferable Procurement Policy* includes examples of acceptable standards for environmentally preferable goods and services such as Green Seal 37 for janitorial products, EPEAT for IT equipment, and GREENGUARD for furniture. The policy explains that acceptable standards should be developed and awarded by an impartial third party – in a public, transparent, and broad stakeholder process – and represent specific and meaningful criteria for that product or service category. It also directs employees to "procure goods, products and services that support City LEED certification." [16]

- **Alameda County, California** maintains a list of acceptable eco-labels on its sustainable purchasing website, which is referenced in its policy.[17]

It is generally not considered practical to list sustainability standards and certifications for all product categories within a sustainable purchasing policy, especially if it would require action by a legislative body whenever a standard is added or revised. This is because the list of potentially available sustainable goods and services is continually growing and sustainability criteria are becoming increasingly complex – often focusing on multiple environmental and health attributes (and sometimes social and economic criteria as well). Instead, municipal leaders in sustainable procurement often describe their processes and procedures in a separate set of sustainable purchasing standards. Municipal employees and contractors can refer to these standards when making purchasing decisions.

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[15] City of San Antonio, *Environmentally Preferred Purchasing Policy* webpage, **http://www.sanantonio.gov/purchasing/procurement/eppp.aspx#12776551-purpose**

[16] City of San Jose, *Environmentally Preferable Procurement Policy (EP3),* April 24, 2011, **https://www.sanjoseca.gov/DocumentCenter/View/3862**

[17] Alameda County, California, RPN's Environmentally Preferable Purchasing (EPP) Resources, **http://www.acgov.org/sustain/documents/EPP_Resources_RPN.pdf**

Below are some examples of policies that call for the creation of sustainable purchasing standards, specifications, and best practices:

- **Washington, DC's** *Procurement Policy and Procedure Directive* directs City employees to use environmentally preferable product and service (EPPS) specifications to the maximum extent possible. It further explains: "To ensure EPPS are procure[d] [sic] to the maximum extent practical, contracting shall utilize all EPPS programmatic tools and resources that support the implementation and maintenance of EPPS specifications as outlined in Section 5 Procedures and in the Sustainable Purchasing User Guide, which is maintained on the [Office of Contracting and Procurement] OCP web page."[18]

- **Portland**, **Oregon's** *Sustainable Procurement Policy* calls for the creation of Citywide sustainable procurement standards. It specifically states that: "The City shall develop Citywide product and service-specific sustainability standards as best practices evolve. These Citywide standards will be developed by Procurement Services in cooperation with stakeholders and approved by the Chief Procurement Officer. Sustainable Procurement standards will incorporate related requirements from City policies, City Code and other City product and service standards. All sustainable procurement standards will be posted on the employee website and incorporated into City procurement processes." Portland's policy further requires employees making City procurement decisions "to comply with the sustainable procurement standards approved by the Chief Procurement Officer." [19]

Best Practice #4

The policy directs the jurisdiction to make sustainable procurement the default action for all major purchasing decisions and accounts for cases where an exception is needed.

Many policies encourage staff to make sustainable procurement decisions *whenever practicable*. This vague requirement – on its own – puts the burden on individual employees to decide whether or not a sustainable purchase is feasible. Making sustainable procurement the default activity – at least for high-spend or specific targeted product and service categories – takes the guesswork out of sustainable procurement for employees. It gives them needed direction by establishing a process to follow to make sustainable purchasing determinations.

Below are some examples of policies that make sustainable procurement the default action:

- **Calgary, Alberta's** *Sustainable and Ethical Procurement Policy* directs its central purchasing agency, Finance and Supply, to "ensure tender clauses in all Finance and Supply documents are revised to reflect the principles, goals and objectives of The City of Calgary's

[18] Washington, D.C., Office of Contracting and Procurement (OCP) *Directive No.: 7000 Procurement Policy & Procedure Directive*, January 1, 2015, **http://ocp.dc.gov/sites/default/files/dc/sites/ocp/page_content/attachments/epps_policy_1.pdf**
[19] City of Portland, Oregon, *Sustainable Procurement Policy*, September 2010, **http://www.portlandonline.com/shared/cfm/image.cfm?id=204110**

sustainable and Ethical Procurement Policy."[20] The incorporation of boilerplate language into all tenders has made it relatively easy for the City's purchasing department to implement the policy.

- **Washington, DC's** procurement policy applies to most high-spend procurements. The City set a monetary threshold and carved out an exemption for its green procurement requirements that states, "Except for emergency procurements, before entering into any contract in excess of $100,000, the District shall issue an environmental certification to demonstrate, to the maximum extent practicable, the purchase of an EPPS [Environmentally Preferable Product or Service]."[21]

- **Portland, Oregon's** *Sustainable Procurement Policy* requires all major procurement decisions to follow standards approved by its Chief Procurement Officer unless an exemption is granted. The policy states, "Upon request, exemptions to the sustainable procurement standards may be granted by the Chief Procurement Officer when product or service availability or other reasonable circumstances hinder compliance with the standards."[22]

- **Seattle, Washington's** *Sustainable Procurement Policy* states that City Purchasing shall:
  - "Ensure that evaluation criteria for selecting a product or service incorporates and encourages sustainability factors by providing scored points or incorporates minimum specifications.
  - Ensure that the qualification of a company as a responsible bidder includes criteria for incorporating environmental responsibility."[23]

Best Practice #5

The policy directs the jurisdiction to establish and meet sustainable procurement goals.

Setting measurable goals in a sustainable procurement policy focuses implementation efforts and makes reporting results clearer and easier. Sustainable procurement goals can include commitments to purchase specific percentages of sustainable products such as renewable energy or reducing the amount of unsustainable products that are purchased. In cases where municipalities have already established sustainability goals in their sustainability plan (including climate action and zero waste plans), those goals can either be referenced or exceeded in their sustainable procurement policy.

Below are examples of municipal sustainability policies that include sustainable procurement goals:

- **Denver, Colorado**'s *2020 Sustainability Goals* include a separate set of government operations goals. One such goal is to: "Reduce energy consumed in city-operated buildings and

[20] City of Calgary, Alberta, *Sustainable Environmental and Ethical Procurement Policy (SEEPP)*, Policy #CFO-008, March 12, 2008, **http://www.calgary.ca/CA/city-clerks/Documents/Council-policy-library/cfo008-Sustainable-Environmental-and-Ethical-Procurement-Policy.pdf**
[21] District of Columbia, *Procurement Practices Reform Act of 2010*, **http://ocp.dc.gov/sites/default/files/dc/sites/ocp/page_content/attachments/islpp-ppra.pdf**
[22] City of Portland, Oregon, *Sustainable Procurement Policy*, September 2010, **http://www.portlandonline.com/shared/cfm/image.cfm?id=204110**
[23] City of Seattle, Washington, *Sustainable Purchasing Policy,* August 11, 2008, find link at **http://seattle.gov/purchasing/GrnPurchPolicies.htm**

vehicles by 20% while doubling renewable energy produced from city facilities over the 2012 baseline."[24]

- **Richmond, Virginia** issued an executive order in 2011 establishing a goal for the City "to reduce its annual vehicle fuel consumption by at least 1% per calendar year."[25]

Best Practice #6

The policy encourages employees to use life-cycle costing (LCC), total cost of ownership (TCO), or other best value assessment methods when making purchasing decisions.

Using LCC or TCO, rather than relying only on initial cost as the basis for making purchasing decisions, offers the most economic value over the lifecycle of the product. Sustainable products and services can reduce costs associated with energy and water consumption, waste disposal, etc. or yield other benefits (such as improving air quality or helping a municipality meet its water quality goals). However, they can have a higher initial price. Conversely, some less sustainable purchases with lower initial price tags may cost the jurisdiction additional funds through their useful lives (e.g., additional energy costs, hazardous waste removal costs, etc.). In order to be able to guard against unwanted additional costs from less sustainable products, and also justify sustainable products and services in the procurement decision-making process, staff may need to be expected to account for these total costs and benefits in all relevant purchases. (*Note:* municipalities may need to revise their municipal procurement code to make "best value" purchasing the default activity.)

Below are examples of policy language designed to eliminate ambiguity about the expectation to use TCO or another best-value assessment method to compare the prices of competing goods and services:

- **Palo Alto, California's** *Environmentally Preferred Purchasing Policy* provides that the evaluation of prices for goods and services "shall factor in life-cycle costs, total product cost over the lifetime of the product (use, maintenance, disposal), risk management, regulatory requirements and penalties for non-compliance."[26]

- **Denver, Colorado's** sustainability policy requires "assessing the total cost of ownership by including initial cost, operating costs, and disposal or end of life cost, with due consideration of leasing as an alternative to outright purchase."[27]

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[24] Denver Office of Sustainability, *2020 Sustainability Goals*, **https://www.denvergov.org/Portals/779/documents/2020SustainabilityGoals_101514.pdf**

[25] City of Richmond, *Mayor's Order #2011-4: For the Establishment of a Green Government,* 2011, **http://static.mgnetwork.com/rtd/pdfs/20110422_city.pdf**

[26] City of Palo Alto, *Environmentally Preferred Purchasing Policy: Policies and Procedures, 5-03/MGR*, February 6, 2008 **http://www.cityofpaloalto.org/civicax/filebank/documents/32651**

[27] City of Denver, Colorado, *Executive Order No. 123: Office of Sustainability and Citywide Sustainability Policy, Memorandum 123-D, Environmentally Preferable Purchasing,* March 11, 2013, **https://www.denvergov.org/Portals/728/documents/NDCC/NWSS%20RFQ%20Executive%20Order%20123.pdf**

Best Practice #7

The policy includes tracking and reporting requirements.

Many sustainable procurement policies include language directing the jurisdiction to report annually (or periodically) on progress implementing its program or achieving its goals. Reporting on an annual basis facilitates accountability to the public; highlights successes, environmental benefits and cost savings; and identifies barriers and further opportunities.

Typically, the policy will require some or all departments to submit information to the purchasing department, the sustainability department, and/or a sustainable procurement team to be compiled into a sustainable procurement report (or into a section of an overall sustainability progress report) for the city manager, county executive, or the municipal legislature. Occasionally, the policy requires the jurisdiction to post the annual progress report on its website to demonstrate how it is leading by example.

Below are some examples of municipal sustainable procurement policies that include an annual reporting requirement:

- **Calgary, Alberta's** *Sustainable and Ethical Procurement Policy* requires each business unit within the City to "meet periodically with Finance and Supply to report on the progress of policy implementation, including: 1. The results of product evaluations and product trials; 2. The status of efforts to maximize sustainable purchasing; and 3. Total purchases of sustainable products and services."[28]

- **Santa Clara County, California's** *Environmentally Preferable Purchasing Policy* directs its EPP Team to "prepare and submit to the Board of Supervisors an annual report summarizing the implementation of the policy during the previous year; policy related goals for the following year; and recommended changes, if any, to the policy or its implementation."[29]

- **Portland, Oregon's** *Sustainable Procurement Policy* includes a detailed section on "Data Collection and Performance Reporting," which prescribes the roles and responsibilities of various City agencies in carrying out this program function. It specifically states:

  City Bureau Directors shall be responsible for:
  - *Cooperating in gathering information for the purposes of tracking, reporting, and evaluating the City's sustainable procurement activities; and*
  - *Integrating Bureau-specific sustainable procurement goals into Bureau sustainability plans.*

[28] City of Calgary, *Sustainable Environmental and Ethical Procurement Policy (SEEPP)*, Policy #CFO-008, March 12, 2008, **http://www.calgary.ca/CA/city-clerks/Documents/Council-policy-library/cfo008-Sustainable-Environmental-and-Ethical-Procurement-Policy.pdf**

[29] County of Santa Clara, CA, *Environmentally Preferable Purchasing Policy*, Adopted September 2009, **http://www.sccgov.org/SCC/docs%2FIntegrated%20Waste%20Management%20(DIV)%2FEPP.pdf**.

The Chief Procurement Officer and Director of the Bureau of Planning and Sustainability shall be responsible for:

- *Collaborating on data collection for the purpose of tracking and reporting on the City's sustainable procurement activities and evaluating the effectiveness of this policy.*

The Chief Procurement Officer shall be responsible for:

- *Issuing an annual or biennial progress report on sustainable procurement activities and the effectiveness of this policy. This report may be a stand-alone report or integrated into a larger Bureau of Procurement Services report.*[30]

- **San Jose, California's** *Environmentally Preferable Procurement Policy* requires the following types of performance measurements to be made: quantification of "the environmental and economic benefits of the procurement of environmental alternatives such as recycled-content paper, biodiesel, and IT equipment by utilizing available product environmental benefits calculators."[31]

- **Seattle, Washington's** *Sustainable Purchasing Policy* directs City Purchasing to "compile records for producing an annual summary of the City's environmentally responsible/ sustainable purchasing actions, and to evaluate the effectiveness in reducing the environmental impacts of City procurement."[32]

Best Practice #8

The policy directs the jurisdiction to periodically review and update its sustainable purchasing policy and procedures.

Sustainable purchasing needs change over time. Therefore, sustainable purchasing policies should follow suit. To keep their policies up-to-date, many cities and counties include guidance about periodically reviewing and updating their policy. It is best practice to review and update your sustainable purchasing policy about every one to three years. Updating it more frequently may deflect energy from implementation, while waiting longer risks not keeping up with emerging priorities.

Examples of policies that provide for regular updates include:

- **Portland, Oregon's** *Sustainable Procurement Policy* directs the Chief Procurement Officer to be "responsible for periodically bring[ing] together internal stakeholders to review this policy for updates or to otherwise determine whether this policy is in alignment with other City sustainability efforts and policies."[33]

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[30] City of Portland, Oregon, *Sustainable Procurement Policy*, September 2010, **http://www.portlandonline.com/shared/cfm/image.cfm?id=204110**

[31] City of San Jose, California, *Environmentally Preferable Procurement Policy (EP3)*, April 24, 2012, **http://www.sanjoseca.gov/documentcenter/view/3862**

[32] City of Seattle, Washington, *Sustainable Purchasing Policy*, Department of Finance and Administrative Services, City Purchasing, August 11, 2008, **http://seattle.gov/purchasing/GrnPurchPolicies.htm**.

[33] City of Portland, Oregon, *Sustainable Procurement Policy*, September 2010, **http://www.portlandonline.com/shared/cfm/image.cfm?id=204110**

- **Raleigh, North Carolina's** *Sustainable Procurement Policy* states: "The manager of the Purchasing Division shall be responsible for periodically bringing together internal stakeholders to review this policy for updates or to otherwise determine whether this policy is in alignment with other City sustainability efforts and policies. This policy review shall be completed at least every five years, but may be done on a more frequent basis as needed."[34]

- **Vancouver, British Columbia's** *Ethical Purchasing Policy* specifies that: "The Manager of Materials Management will be responsible for reviewing the EPP [Ethical Purchasing Policy] and SCC [Supplier Code of Conduct] annually and reporting findings to Council annually. Through consultations with key stakeholders (suppliers, subject experts, city staff, etc.) the Manager of Materials Management will identify and recommend revisions to the EPP and SCC. Such review will include a review of new items for potential inclusion within the scope of the EPP (e.g., new fair trade certified agricultural products)."[35]

MODEL POLICIES OF USDN MEMBERS

Denver, CO; *Office of Sustainability and Citywide Sustainability Policy, Memorandum 123-D, Environmentally Preferable Purchasing*, 2013 (pdf)

Key Elements

- **Addresses Three Pillars of Sustainability**
  This policy encourages "'triple-bottom line' analysis in City policy and program decisions, i.e., short- and long-term economic, social, and environmental considerations."

- **Delineates Roles and Responsibilities**
  This policy outlines responsibilities for the Purchasing Division of General Services, which serves as the lead agency for the City's EPP program, as well as City agencies. Some of the responsibilities of the Purchasing Division include: providing guidance to all City agencies on EPP requirements, processes, and strategies; providing training to buyers; and communicating the City's EPP program to all agencies.

- **Calls for Development of Sustainable Procurement Tools**
  This policy requires the Purchasing Division to "assist agencies in developing product and service specifications that meet the requirements of the City's EPP Program" and "where appropriate ensure EPP criteria are included in product or service evaluations." Additionally, City agencies must "seek products where claimed environmental performance has been certified or rated by an independent, reliable third party entity."

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[34] City of Raleigh, North Carolina, *Sustainable Procurement Policy*, November 4, 2011, **http://www.raleighnc.gov/environment/content/AdminServSustain/Articles/SustainabilityReport.html** (See link to Raleigh's Sustainable Procurement Policy on this webpage).
[35] City of Vancouver, BC, *Ethical Purchasing Policy*, February 17, 2005, **http://former.vancouver.ca/policy_pdf/AF01401.pdf**

- **Makes Sustainable Procurement the Default Action**
  This policy requires the Purchasing Division to "include standard EPP language in all formal solicitations and [to] update as necessary." Furthermore, City agencies must "clearly and accurately communicate environmental goals and requirements in all request to purchase documents and formal solicitations whenever appropriate" as well as " include EPP considerations in initial needs assessments for all product and service procurement."

- **Calls for Sustainable Procurement Goals**
  This policy is part of a broader Sustainability Policy, which includes a set of government operations goals related to sustainable purchasing. One such goal is to "reduce energy consumed in city-operated buildings and vehicles by 20% while doubling renewable energy produced from city facilities over the 2012 baseline."

- **Encourages Life-Cycle Costing or Other Best Value Assessment Methods**
  This policy requires "assessing the total cost of ownership by including initial cost, operating costs, and disposal or end of life cost, with due consideration of leasing as an alternative to outright purchase."

- **Includes Tracking and Reporting Requirements**
  This policy requires the Purchasing Division to "track and report annually on the City's EPP Program."

City of Portland, OR *Sustainable Procurement Policy*, 2010 (pdf)

Key Elements

- **Addresses Three Pillars of Sustainability**
  This policy directs City employees to "procure materials, products, or services in a manner that integrates fiscal responsibility, social equity, and community and environmental stewardship." Furthermore, the policy lists specific environmental, social equity, and fiscal factors to be considered when writing specifications for or procuring materials, products, or services.

- **Delineates Roles and Responsibilities**
  This policy spells out the responsibilities of the Chief Procurement Officer and City Bureau Directors to establish product and service standards; ensure that contracting manuals and specifications reference sustainable procurement standards and best practices; build awareness of the City's policy and sustainable procurement standards among City staff; and gather information needed to track, report, and evaluate the City's sustainable procurement activities.

- **Calls for Development of Sustainable Procurement Tools**
  This policy directs the City to "develop Citywide product and service-specific sustainability standards as best practices evolve. These Citywide standards will be developed by Procurement Services in cooperation with stakeholders and approved by the Chief Procurement Officer. Sustainable Procurement standards will incorporate related requirements from City policies, City Code, and other City product and service standards. All sustainable procurement standards will be posted on the employee website and incorporated into City procurement processes." Portland's policy further requires employees making City procurement decisions "to comply with the sustainable procurement standards approved by the Chief Procurement Officer."

The policy also encourages City employees to "use independent, third-party social and/or environmental (eco) product or service label standards when writing specifications for, or procuring materials, products, or services, so long as such labels: were developed and awarded by an impartial third-party; were developed in a public, transparent, and broad stakeholder process; and represent specific and meaningful leadership criteria for that product or service category. In addition, whenever possible, label standards used in product or service specifications should represent standards that take into account multiple attributes and life-cycle considerations, with claims verified by an independent third-party."

- **Makes Sustainable Procurement the Default Action**
  This policy requires all major procurement decisions to follow standards approved by its Chief Procurement Officer unless an exemption is granted. The policy states that "upon request, exemptions to the sustainable procurement standards may be granted by the Chief Procurement Officer when product or service availability or other reasonable circumstances hinder compliance with the standards."

- **Calls for Sustainable Procurement Goals**
  This policy tasks City Bureau Directors with "integrating Bureau-specific sustainable procurement goals into Bureau sustainability plans."

- **Includes Tracking and Reporting Requirements**
  This policy includes a detailed section on "Data Collection and Performance Reporting," which prescribes the roles and responsibilities of various City agencies in carrying out this program function. The Chief Procurement Officer is ultimately responsible for "issuing an annual or biennial progress report on sustainable procurement activities and the effectiveness of this policy."

- Requires Review/Update of Sustainable Procurement Policy and Procedures
  This policy directs the Chief Procurement Officer to be "responsible for periodically bringing together internal stakeholders to review this policy for updates or to otherwise determine whether this policy is in alignment with other City sustainability efforts and policies."

District of Columbia, *Environmentally Preferable Purchasing Policy*, 2015 (pdf)

Key Elements

- **Makes Sustainable Procurement the Default Action**
  This policy applies to most high-spend procurements. The City set a monetary threshold and carved out an exemption for its green procurement requirements that states "except for emergency procurements, before entering into any contract in excess of $100,000, the District shall issue an environmental certification to demonstrate, to the maximum extent practicable, the purchase of an EPPS."

- **Calls for Development of Sustainable Procurement Tools**
  This policy directs contracting staff to "utilize all EPPS programmatic tools and resources that support the implementation and maintenance of EPPS specifications as outlined in Section 5

Procedures and in the Sustainable Purchasing User Guide, which is maintained on the [Office of Contracting and Procurement] OCP web page."

- **Includes Tracking and Reporting Requirements**
  This policy provides contracting staff with detailed instructions on how to track sustainable purchases in their procurement system. This includes indicating when a contract incorporates EPPS requirements and working with procurement stakeholders to track and implement the environmentally preferable requirements, indicating when a contract does not incorporate EPPS requirements and why, and indicating when a purchase does not have EPPS specification guidance but may be still be considered an environmentally preferable purchase.

San José, CA *Environmentally Preferable Procurement Policy (EP3)*, 2012 (pdf)

Key Elements

- **Delineates Roles and Responsibilities**
  This policy outlines the responsibilities of the City Manager, who must "ensure the development and maintenance of implementation guidelines that provide sufficient direction and clarity to carry out this Policy in an efficient and accountable manner."

- **Calls for Development of Sustainable Procurement Tools**
  This policy tasks the City Manager with establishing "guidelines governing the development, review, and approval of specifications for procurement of products and services that address recycled content, recyclability, energy and water conservation, life cycle cost, extended producer responsibility, toxins reduction, rapidly renewable materials, forest protection, preference for local products, and other environmental considerations, and support Green Building certification efforts."

  Furthermore, this policy calls for the City to procure products and services that "meet environmental product standards established by governmental or other widely recognized authorities." Examples include Green Seal, EPEAT, and GreenGuard. The standards should be "developed and awarded by an impartial third-party; developed in a public, transparent, and broad stakeholder process; and represent specific and meaningful criteria for that product or service category." If no standards exist, the City is directed to integrate other environmental factors into purchasing decisions. For example, purchasing "fleet vehicles that provide the best available fuel efficiency and net reduction in vehicle fleet emissions" and "goods, products, and services that support City LEED certification."

- **Calls for Sustainable Procurement Goals**
  This policy sets a goal to “ensure that at least 30% of direct purchases of food served in City facilities is locally grown and organic.”

- **Encourages Life-Cycle Costing or Other Best Value Assessment Methods**
  This policy lists life cycle analysis as a factor the City should consider when making purchases. Life cycle analysis is defined as "the comprehensive accounting of the total cost of ownership, including initial costs, energy, and operational costs, longevity and efficacy of service, and disposal costs."

- **Includes Tracking and Reporting Requirements**
  The City Manager must submit an annual report to the City Council that includes "documentation of the types, quantities, and dollar amounts of environmentally preferable products and their economic and environmental benefits (including the percentage of post-consumer and total recovered material content)." Furthermore, the policy directs the City Manager to use available environmental benefits calculators to "quantify the environmental and economic benefits of the procurement of environmental alternatives such as recycled content paper, biodiesel, and IT equipment."

- **Requires Review/Update of Sustainable Procurement Policy and Procedures**
  The policy directs the City Manager to "review this Policy at least every five years, and present any recommendations to the City Council."

Spokane, WA, *Administrative Policy and Procedure: Environmentally Preferable Purchases*, 2014 (pdf)

Key Elements

- **Delineates Roles and Responsibilities**
  This policy outlines the responsibilities of the Accounting Department, the Environmental Programs section of the Public Works and Utilities Division, the Green Team, and all City Departments in implementing green purchasing requirements. For example, the Accounting Department, Environmental Programs, and the Green Team must "inform departments of their responsibilities and provide implementation assistance."

- **Calls for Development of Sustainable Procurement Tools**
  This policy directs the Accounting Department, with Environmental Programs and the Green Team, to "develop an environmentally preferable purchases list and annual updates." The Accounting Department also must "maintain and disseminate information about environmentally preferable purchases to be used by departments whenever possible...includ[ing] procurement opportunities, specifications, and performance."

- **Includes Tracking and Reporting Requirements**
  This policy requires Environmental Programs to submit an annual report to the Mayor and City Council that includes a compilation of procurement data collected from all departments; a current status of product evaluations conducted by departments; and an assessment of program effectiveness, evaluation of program goals, and projections of future procurement opportunities.

- **Requires Review/Update of Sustainable Procurement Policy and Procedures**
  As part of the annual report, the Accounting Department must also make recommendations for changes in procurement policy. Additionally, Environmental Programs and the Green Team are tasked with making recommendations for future EPP policies.

PRODUCT AND OUTCOME-SPECIFIC SUSTIAINABLE PROCUREMENT POLICIES

Some municipalities choose to adopt more specific sustainable purchasing policies geared toward a particular product or service category (e.g., electronics, cleaning products, etc.) or a sustainability outcome (e.g., energy efficiency, toxics reduction, etc.). Product- and outcome-specific policies can boost a municipality's sustainable procurement program by giving it a specific initiative to focus on. These policies can take many forms: they can be stand-alone policies or they can be inserted into a broader sustainable procurement policy. Sometimes these policies supplement an existing general sustainable purchasing policy while other times they can serve as precursors to developing a more over-arching sustainable purchasing policy.

Product-Specific Procurement Policies

Many local governments have built or bolstered their sustainable procurement program through the adoption of one or more policies that support the procurement of sustainable goods and services in a specific category. One reason that municipalities adopt these policies is that it enables them to develop detailed guidance on the purchase, use, and in some cases, disposal of specific product categories. If a jurisdiction does adopt a separate product-specific procurement policy, it is important for it to be posted along with the jurisdiction's other sustainable procurement policies so that it doesn't get forgotten.

Below are several examples of category-specific sustainable procurement policies (including policy language that is embedded in a broader policy):

- Bottled Water Bans

  St. Louis, Missouri's *Executive Order #43* prohibits its "departments, divisions, and agencies [from] purchasing single-serving bottled water for employee consumption with City funds."[36]

- Green Cleaning Policies

  Santa Clara County, California's *Green Cleaning Administrative Guidance* states: "All cleaning products used within County-owned or operated facilities shall be certified by a nationally recognized, third party, certifying organization or the products must be approved by the procuring department as equal to the green certified products, unless green products are unavailable, not cost effective or not practicable."[37]

- Green Building Policies

  Sustainable procurement requirements can be incorporated into a municipality's green building policy. Doing so can direct the jurisdiction's employees and contractors to include sustainability criteria in some or all of their procurement decisions related to construction, renovation, and

[36] City of St. Louis, Missouri, *Executive Order #43: Prohibition of Purchase of Single-Serving Bottled Water*, August 20, 2008, **https://www.stlouis-mo.gov/government/departments/mayor/documents/upload/STL-Executive-Order-on-Bottled-Water.pdf**

[37] Santa Clara County, California, *Board of Supervisors Policy Manual, Section 8.3 Green Cleaning Policy*, Adopted September 10, 2013, **https://www.sccgov.org/sites/bos/Legislation/BOS-Policy-Manual/Documents/BOSPolicyCHAP8.pdf**

operation of government-owned buildings and other facilities. This can particularly influence the types of construction materials, lighting and HVAC equipment, and facility maintenance products that are used by local government employees and contractors.

Cleveland, Ohio's *Sustainable Municipal Building Policy*, for example, directs City employees "to incorporate green building practices into the siting, design, construction, remodeling, repair, maintenance, operation, and deconstruction of all City facilities." This policy includes several specific sustainable procurement requirements including, but not limited to, the use of reflective pavement to mitigate heat island effects; reflective and vegetative roofs; energy-efficient (ENERGY STAR) appliances; water-efficient (WaterSense-labeled) faucets and toilets; and on-site renewable energy systems on City property.[38]

- Green Fleet Policies

  Minneapolis, Minnesota's *Green Fleet Policy* includes the following policy objective of: "Purchas[ing], when necessary, new vehicles that provide the best available net reduction in vehicle fleet emissions, considering life-cycle economic and environmental impacts (e.g., by purchasing more efficient or alternative fuels vehicles)".[39] [More information on green fleet policies can be found in Chapter 9 of this *Playbook*.]

- Green IT Policies

  San Francisco, California's *Approved Environmentally Preferable Purchasing Requirements for Personal Computers and Servers* directs City departments to purchase personal computers, notebook computers, and monitors that meet the EPEAT Gold standard.[40] [More information on green electronics policies can be found in Chapter 8 of this Playbook.]

- Integrated Pest Management Policies

  Eugene, Oregon's *Resolution No. 5101* prohibits the City of Eugene from using products that contain neonicotinoids on any City property, and calls for all departments within the City of Eugene to adopt an IPM policy and associated operational procedures.[41]

- Paper Reduction Policies

  Seattle, Washington's *Executive Order 01:05 Paper Waste Prevention* directing City departments to:

  - Reduce paper use by 30% by the end of 2006;
  - Purchase 100% recycled paper as the City standard for printing and copying;
  - Adopt available technology that will create paper efficiencies;

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[38] City of Cleveland, Ohio, *Sustainable Municipal Building Policy*, April 2013, **http://webapp.cleveland-oh.gov/aspnet/moc/Sust_Bldg_Policy_Cleveland-FINAL_April2013.pdf**

[39] City of Minneapolis, Minnesota, *Green Fleet Policy*, December 2, 2010, **http://www.minneapolismn.gov/www/groups/public/@council/documents/webcontent/convert_259214.pdf**

[40] City and County of San Francisco, California, Committee on Information Technology (COIT), *COIT/SF Approved Environmentally Preferable Purchasing Requirements for Personal Computers and Servers*, **http://www.sfcoit.org/Modules/ShowDocument.aspx?documentid=122**

[41] City of Eugene, Oregon, Resolution 5101, February 26, 2014. **https://www.eugene-or.gov/DocumentCenter/View/15572**

- Apply these paper waste prevention measures to procurement, consultant contracts, and contracts for printing, copying, and related services from outside vendors; and
- Include reporting of progress towards the 15% interim paper reduction goal in department accountability contracts.[42]

- Renewable Energy Procurement Policies

  Austin, Texas', *Climate Protection Plan* made a commitment to power 100% of City of Austin (COA) facilities with renewable energy by 2012 (which it met) and "make all COA facilities, fleets, and operations totally carbon-neutral by 2020."[43]

- Sustainable Food Procurement Policies
  - **Los Angeles, California's** *Good Food Purchasing Pledge* promotes the City's procurement of local and sustainably produced food products.[44]

  - **Toronto, Ontario's** *Purchase of Coffee, Tea and Sugar Policy* directs divisions to include buy fair trade-certified products for purchasers greater than $3,000.[45]

Outcome-Specific Procurement Policies

Outcome-specific sustainable procurement policies are focused on bringing about a specific sustainability outcome such as reducing toxic exposures or increasing the amount of recycled content in products, and often apply to multiple product categories. Below are several examples.

- "Buy Local" Policies

  Some municipalities encourage buying locally-produced goods and services because it supports the local economy and reduces environmental impacts, especially those associated with transportation.

  Cleveland, Ohio's *Local and Sustainable Purchasing Ordinance* provides a 2-4% bid preference for companies that source products locally and/or are certified as a sustainable business.[46]

  ### Can My Jurisdiction "Buy Local" in Practice?

  Many municipalities, particularly in Canada, are deterred from adopting policies that specify or give preference to local companies by the potential legal restrictions arising from trade agreements. Examples of trade agreements that affect Canadian purchasing include: the

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[42] City of Seattle, Washington, Office of the Mayor, *Executive Order 01-05: Paper Waste Prevention*, Issued February 2005, **http://clerk.ci.seattle.wa.us/~CFS/CF_307185.pdf**

[43] City of Austin, *2008 Climate Protection Plan* webpage, **https://austinenergy.com/**

[44] City of Los Angeles, California, Good Food Purchasing Pledge. October 24, 2012. **http://clkrep.lacity.org/onlinedocs/2011/11-1678_ca_10-24-12.pdf**

[45] City of Toronto, Ontario, *Purchase of Coffee, Tea and Sugar Policy*, April 12, 2013, **http://www1.toronto.ca/City%20Of%20Toronto/Purchasing%20and%20Materials%20Management/Selling%20to%20the%20City/Purchasing%20&%20Material%20Management/Policies-Legislation/coffee.pdf**

[46] City of Cleveland, Ohio, *Local and Sustainable Purchasing Ordinance*, March 29, 2010, **http://www.city.cleveland.oh.us/CityofCleveland/Home/Government/CityAgencies/OfficeOfSustainability/LocalFoodsAndSustainableBusiness**

Agreement on Internal Trade, the New West Partnership Agreement, and the Comprehensive Economic and Trade Agreement.

If your jurisdiction is hesitant to formally call out local preferences in requests for proposal or tenders, informing local suppliers of opportunities and encouraging them to apply to your jurisdiction's bid requests can go a long way toward receiving competitive proposals from these businesses, which may then be organically selected above their competitors.

- Energy-Efficient Procurement Policies

  Because energy-efficient products have demonstrated cost savings in a short time frame – particularly when utility rebates are factored in – many municipal procurement and green building policies promote their use. Some cities and counties have adopted stand-alone energy-efficient purchasing policies as a way to focus attention on the procurement of energy-efficient products. Below are two examples

  - **New York City** adopted an energy-efficient procurement law that requires: *Any faucet, showerhead, toilet, urinal, fluorescent tube lamp, fluorescent ballast, industrial HID luminaire, downlight luminaire, fluorescent luminaire or compact fluorescent lamp that is purchased or leased by any agency for which the federal energy management program of the United States department of energy has issued product energy efficiency recommendations shall achieve no less energy efficiency…than the minimum recommended in such recommendations.*[47]

  - **Cambridge, Massachusetts** adopted an *Energy Star Purchasing Policy* requiring all new equipment purchased for City operations to be ENERGY STAR-certified or meet equivalent standards: "As the City replaces older equipment, new Energy Star equipment will reduce the energy load in City buildings."[48]

  Other cities have incorporated procurement requirements into a broader energy-efficiency policy for their jurisdiction. **Houston, Texas'** *City Energy Efficiency Policy,* states: "All equipment, appliance and computer purchases should be Energy Star rated, when possible."[49]

- Ethical Purchasing Policies

  Calgary, Alberta was one of the first municipalities in North America to embrace the social and economic pillars of sustainability in its municipal purchasing policy. Its *Sustainable Environmental and Ethical Procurement Policy* states:

  The purpose of this policy is to:

[47] The City of New York, New York, *Local Law 119, In Relation to the Purchase of Energy Efficient Products*, December 30, 2005, **http://www.nyc.gov/html/mocs/downloads/pdf/epp/LL%20119%20(536).pdf**

[48] The City of Cambridge, Massachusetts, Department of Public Works, Energy Management: Energy Star Purchasing Policy," *The Works*, 2015, **https://www.cambridgema.gov/theworks/greenliving/WhatWeAreDoing/energymanagement**

[49] City of Houston, Texas, *City Energy Efficiency Policy*, December 31, 2011, **http://www.houstontx.gov/adminpolicies/7-1.pdf**

- *Develop a supplier community that exhibits leadership in corporate social responsibility through their efforts to continuously improve best practices that protect the welfare of workers and the environment while maintaining a competitive position in the market;*
- *Embed ethical, environmental and economic performance criteria into all City supply chain procedures, processes and activities;*
- *Support the purchase of goods and services that will enhance and protect the environment, protect the welfare of workers and represent best value for the corporation; and*
- *Advance corporate culture at the City that recognizes and places a priority on sustainability.*[50]

Dozens of municipalities in the United States have adopted policies aimed at ensuring that their purchasing decisions – particularly for uniforms and other garments – are not manufactured using child labor, made in sweatshops, or manufactured in factories that have unsafe or unhealthy working conditions.

St. Louis, Missouri adopted a *Sweatshop Free Procurement Policy* that requires vendors to "complete a procurement disclosure form documenting the location of the factory where the items purchased by the City will be manufactured, the minimum base hourly wage of the employees employed by the factory, working hours of factory employees, benefits provided to factory employees and whether the factory is under investigation for any violation of State, Federal or local laws."[51] Additional sweatshop-free purchasing policies adopted by local governments (e.g., Austin, Texas; Berkeley, Los Angeles, and San Francisco, CA; Ithaca, NY; Madison, WI; Portland, OR; Seattle, WA; and Santa Fe, NM) are available on a website maintained by the Sweatfree Purchasing Consortium.[52]

- Sustainable Infrastructure Policies

Traditionally, sustainable purchasing has been largely limited to products and services used in daily operations and has not been applied to large capital infrastructure projects such as the construction of roads, bridges, and water treatment facilities. Recently, that has started to change.

Tacoma, Washington adopted a *Green Roads Policy* in July 2015, for example, that commits the City to designing, constructing, and maintaining its roads and other transportation infrastructure in a way that promote environmental, economic, and social stewardship.[53] **[This is a sustainability policy, not a sustainable procurement policy. Move to Chapter 5.]**

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[50] City of Calgary, Alberta, *Sustainable Environmental and Ethical Procurement Policy (SEEPP)*, Policy #CFO-008, March 12, 2008, **http://www.calgary.ca/CA/city-clerks/Documents/Council-policy-library/cfo008-Sustainable-Environmental-and-Ethical-Procurement-Policy.pdf**

[51] The City of St. Louis, Missouri. *A Resolution Pertaining to Sweatshop Free Procurement*, June 29, 2012, **https://www.stlouis-mo.gov/internal-apps/legislative/upload/resolution/res0791.pdf**

[52] Sweatfree Purchasing Consortium Resource Library; **http://buysweatfree.org/resource_library**

[53] City of Tacoma, Washington, *Green Roads Policy* (Resolution No. 38945), July 8, 2014, **http://cms.cityoftacoma.org/sustainability/Resolution_No_38945.pdf**

- Toxics Reduction Policies

  Portland, Oregon's *Healthy Purchasing Initiative* requests "chemical ingredient hazard disclosure of goods and materials purchased by the City including but not limited to: cleaning supplies, office supplies, building products and materials, infrastructure materials."[54]

- Waste Reduction Policies

  Waste reduction policies can include a variety of provisions, from buying products that contain recycled content, are reusable, and/or recyclable to product take-back.

  Denver, Colorado's environmentally preferable purchasing policy states that all City departments must: "purchase and/or use, where practicable, reusable products, recycled content products and recyclable products…[and] ensure that contracts issued by the department for recycled products require the maximum practicable amount of recycled material and that contractors provide certification of this content and report amounts used."

  San Jose, California's *Environmentally Preferable Procurement Policy* states that the City will include product specifications that address:

  - *Durability and minimization of waste in the product design, materials content, manufacturing processes, packaging, distribution, and end-of-life management. Areas of consideration include the use of virgin material, water, energy, hazardous substances, product longevity, recycled content, recyclability, and product takeback.*
  - *Free or low-cost product takeback services (e.g.; collection, recycling, remanufacturing, and proper disposal of their products).*
  - *Documentation that products previously purchased or leased are in fact reused, recycled, or otherwise safely managed at the end of their useful lives*

[54] City of Portland, Oregon, *Resolution No. 36958: Healthy Purchasing Initiative*, September 19, 2012, **http://www.portlandoregon.gov/brfs/article/424856**

Chapter 4: Designing a Sustainable Procurement Program

This chapter showcases sustainable procurement program elements that have been created and implemented by USDN members and other local governments. It also recommends six best practices cities and counties should consider when designing a sustainable procurement program.

BEST PRACTICES

Best Practice #1

Dedicate sufficient staff time and other resources to develop, implement, and continuously improve your municipality's sustainable purchasing program.

A common element of successful municipal sustainable procurement programs is dedicated staff time and other resources to develop, implement, and continually advance a sustainable procurement program. In order for the program to be effectively and efficiently implemented, the jurisdiction should clearly delineate staff roles to carry out all of the major functions of the program. As noted in *Chapter 3: Developing a Sustainable Procurement Policy*, many local governments have prescribed staff responsibilities in their sustainable purchasing policies.

However, many local governments do not have a coordinated sustainable purchasing program. Instead, various departments – including purchasing, facilities, engineering, and fleets – have undertaken sustainable purchasing independently rather than within a clearly defined program infrastructure. Consequently, no one is responsible for coordinating the program or is accountable for its success. This decentralized model results in duplication of effort and missed opportunities to share experiences and aggregate demand for products and services.

Therefore, a particularly important element is a designated staff person (usually in the purchasing department) who – as part or all of his or her job – serves as the central point-of-contact for the program. This person coordinates sustainable procurement activities and answers questions about policies and procedures posed by employees and vendors. In addition, it is important for other staff – particularly purchasing agents and departmental managers – to understand their roles and responsibilities in carrying out the jurisdiction's sustainable purchasing policy.

An important element of a sustainable procurement program is a central point of contact that is responsible for coordinating cross-functional teams to identify program priorities, develop specifications, conduct outreach, and undertake reporting. The most effective sustainable purchasing programs place this position in the jurisdiction's purchasing department, from which it coordinates with sustainability staff, who have technical expertise in various environmental and energy-related issues.

Many municipal leaders in sustainable procurement, including Edmonton and Calgary, Alberta; Portland, Oregon; San Francisco and Santa Monica, California, Seattle, Washington; Vancouver, British Columbia; and Washington, D.C, support dedicated staffing for their sustainable procurement program and have clearly defined the roles and responsibilities of other employees in carrying it out. Below are descriptions of how local governments are staffing their sustainable purchasing programs:

- The **District of Columbia** has a Sustainable Purchasing Program Manager in its Office of Contracting and Procurement. Similarly, **Portland, Oregon's** Sustainable Procurement Coordinator is positioned in the City's Procurement Services Department.

- **King County, Washington**, has maintained at least one full-time staff person within its Procurement and Contract Services Department to coordinate its Environmental Purchasing Program for more than a decade. The County has been able to demonstrate that the activities of these individuals more than pay for the cost of having them on staff.

- **San Francisco's** sustainable procurement program is staffed by several employees that work for its Department of the Environment (SFE) and have specific subject matter expertise. SFE staff coordinate with various buyers in its Office of Contract Administration to identify and pursue sustainable procurement opportunities, and to quantify the effectiveness of its sustainable purchasing program in an annual report to the County Board of Supervisors. Together, they create and work with departmental end-user groups to undertake specific sustainable procurement initiatives. For example, it has worked with electricians from multiple City departments to develop contracts for environmentally preferable lighting equipment and with custodial staff to pilot test and create contracts for green cleaning supplies and equipment.

Some cities and counties have established a formal Green or Sustainable Purchasing Committee in lieu of – or in addition to – hiring a sustainable procurement program coordinator. The committee is typically tasked with identifying practical sustainable procurement opportunities, developing sustainable procurement specifications and applying them to contracts, and promoting the availability of sustainable products and services to the jurisdiction's many departments. For example, **Palo Alto, California** has created a multi-agency Green Purchasing Team that meets to identify and implement the City's green purchasing priorities.

In addition to providing dedicated staff time, municipalities can bolster the effectiveness of their sustainable procurement programs by committing other resources such as grants and loans that can enable local government departments to transition to using sustainable products and services that may have a higher initial cost.

Minneapolis, Minnesota, for instance, has a *Lead by Example Fund* that has helped its departments offset the cost associated with pilot testing and purchasing green cleaning supplies and other sustainable goods and services.

Best Practice #2

Undertake periodic (e.g., annual) planning and prioritization activities to identify upcoming sustainable purchasing opportunities.

Planning and prioritization activities are critically important aspects of a successful sustainable purchasing program because they facilitate continuous improvement. The sustainable procurement prioritization assessment can take into consideration potential environmental and other sustainability impacts, cost-saving opportunities, annual spending and past sustainable procurement efforts, contract rebidding schedules, staff capacity, and other factors that can help determine where to focus the program's upcoming activities.

Prioritization and planning can also help the jurisdiction focus on sustainable procurement initiatives that can:

- Help it come into compliance with environmental laws and/or meet its community-wide sustainability goals (particularly where it may be lagging) such as greenhouse gas emissions reduction, water conservation, elimination of chemicals of concern in products, etc.;
- Save the jurisdiction money;
- Serve as a proving ground for new technologies; and
- Have a transformational effect on the marketplace.

Many municipal leaders in sustainable procurement set goals for and prioritize their sustainable purchasing activities and impacts on an ongoing basis. These goals often are designed to help the jurisdiction meet its targets for reducing the amounts of electricity, fuel, water, and/or paper their facilities and fleets are consuming; the amounts of solid waste and/or emissions of greenhouse gases they are generating, and/or the percentage of renewable energy or locally-sourced food they are purchasing for use in their municipal operations.

In its 2004 *Action Plan for Sustainability*, **Fort Collins, Colorado,** became one of the first U.S. municipalities to establish sustainability goals for its municipal buildings and fleet operations. These have been primarily aimed at reducing its greenhouse gas emissions as well as its electricity, petroleum, and water consumption and its generation and disposal of solid waste.[55]

The sustainability goals that apply to the Fort Collins' operations are being met with a combination of procurement activities (such as purchasing alternative fuel vehicles and high-efficiency lighting equipment) as well as changes in procedures and practices (such as improved recycling and implementation of systems for electronic submission of bids and other City documents).

While many sustainable procurement policies and related program documents encourage local governments to undertake sustainable procurement "to the greatest extent practicable," setting numerical goals for reducing impacts (such as energy or paper consumption) or for undertaking a certain number of high-impact sustainable procurement actions, will better ensure that these activities will happen. Several jurisdictions have established and maintained coordinated systems that are designed to ensure initial

[55] The City of Fort Collins' Sustainability Goals, can be accessed online at **http://www.fcgov.com/sustainability/goals.php**

implementation and continuous improvement of their sustainable purchasing programs.

Portland Oregon, for example, in conjunction with neighboring Multnomah County, approved a resolution to develop a *Sustainable Procurement Strategy: A Joint City of Portland and Multnomah County Effort*. It was established to speed up the implementation of environmental sustainability actions in the two municipalities by promoting three major goals:

- *Complete a review and procurement policy update of at least 3 to 5 major commodity areas annually for the next five years resulting in improvements in 15 to 25 major commodity areas. Each review and update should result in commodity or contract specific guidelines and/or specification, policy, rule and/or code changes.*

- *Monitor sustainable product availability within select commodity areas and rigorously address possible opportunities for use by the City of Portland and Multnomah County.*

- *Design and implement an employee education program in conjunction with the City of Portland Office of Sustainable Development and Multnomah County Department of Business and Community Services.*[56]

Since 2005, the **City of San Francisco, California,** has utilized a sustainable purchasing prioritization process that encourages community members to comment on its proposed priorities during its transparent public participation process. Under its Precautionary Purchasing Ordinance, the City set its sustainable purchasing priorities based on an assessment of its inventory of hazardous chemical products used by its municipal operations. It then established green purchasing standards designed to reduce environmental and health impacts, and field tested products to ensure that they perform well.

For a more detailed discussion of planning and prioritization, see *Chapter 5: Setting Sustainable Procurement Priorities*.

Best Practice #3

Develop procedures, standards, and tools to help employees implement your sustainable purchasing policy.

Successful sustainable procurement programs establish clear and comprehensive procedures for employees and vendors to follow to ensure consistent implementation of sustainable purchasing policies. The most effective programs also have an accompanying set of tools that guide employees through this process. These "rules of the road" provide a single, standardized interpretation of the policy, eliminating the inefficiency of each staff person having to interpret the jurisdiction's policy on their own.

Some tools that are commonly developed and utilized by municipal sustainable procurement leaders include:

[56] City of Portland, Oregon. *Sustainable Procurement Strategy: A Joint City of Portland and Multnomah County Effort*. March 20, 2002. http://www.chej.org/ppc/archives/purchasing/file018.pdf

- ***A checklist to help buyers add sustainability requirements to bid solicitations*** by identifying the sustainability risks and opportunities that are relevant to the product or service at hand;
- ***A menu of boilerplate language and "sustainable" core (or market basket) lists of products and services*** that employees can insert into their bid solicitation documents;
- ***A Sustainable Procurement Best Practices Manual*** that highlights eco-labels and other environmental standards the jurisdiction will accept as well as procedures staff are directed to follow in order to comply with sustainable procurement policies;
- ***Environmental and ethical specifications*** as well as bid evaluation criteria to follow when assessing the sustainability attributes of the products and services vendors are offering in response to the jurisdiction's solicitations;
- ***A list of some minimum standards*** that communicates the expectation for vendors to meet basic, internationally accepted standards for labor treatment and environmental practices (e.g., a "Supplier Code of Conduct" or similar);
- ***A questionnaire that can be inserted into bid solicitations*** to elicit information on the vendor's own corporate sustainability practices, as distinct from the product or service they are providing (e.g., a "Vendor Sustainability Leadership Questionnaire" or similar); and
- ***Piggybacking language*** that can be added to contracts for sustainable goods and services that enables other local governments to use it.

While the sustainable purchasing policies of many municipalities contain some specific guidance on the sustainability standards employees should follow when making purchasing decisions, they are rarely comprehensive. By adopting complementary administrative guidance documents detailing approved sustainable procurement standards and procedures, local governments can establish a systematic process for providing sustainable purchasing recommendations to their employees and contractors. Such guidance documents should be periodically reviewed and updated as needed in order to ensure that they reflect current standards.

Standards and certifications that are commonly accepted today include, but are not limited to:

- **Biodegradable Products Institute (BPI)**, which certifies food service ware items, bags and other products that are compostable in a commercial composting facility (see http://www.bpiworld.org)

- **Cradle to Cradle** guides designers and manufacturers through a continual improvement process that looks at a product through five quality categories — material health, material reutilization, renewable energy and carbon management, water stewardship, and social fairness. A product receives an achievement level in each category — Basic, Bronze, Silver, Gold, or Platinum (see **http://www.c2ccertified.org**)

- The **Electronic Products Environmental Assessment Tool (EPEAT)**, which rates green computer equipment (e.g., desktops, laptops, and monitors), imaging

equipment (e.g., copiers, printers and multi-function devices), and TV sets based on multiple criteria including energy efficiency, absence of toxic flame retardant chemicals, presence of recycled content, etc. (http://www.epeat.net)

- **ENERGY STAR**, a federal program that certifies energy-efficient appliances, lighting and HVAC equipment, office electronics, and other products (http://www.energystar.gov)
- **Forest Stewardship Council (FSC)**, which certifies wood and paper products that are derived from sustainably managed forests (https://us.fsc.org/en-us) **Green Seal**, which develops standards for and certifies green cleaning and floor maintenance products, low-toxicity hand soap and paint, and environmentally preferable janitorial paper products. It also certifies janitorial service providers and hotels that meet its standards. (http://www.greenseal.org)
- **Green-e**, which certifies electricity and products made with 100% renewable energy (http://www.green-e.org)
- **Safer Choice**, a program run by US EPA that certifies low-toxicity products such as hand soaps, furniture and metal polish, laundry and dish detergents, specialty cleaning products, etc.(http://www.epa.gov/saferchoice)
- **UL,** which certifies products that meet its environmental standards, including EcoLogo (environmentally preferable product) and GREENGUARD (low-emitting product) (http://productguide.ulenvironment.com/QuickSearch.aspx)
- **USDA BioPreferred/Biobased**, is a single-attribute certification program that covers products such as printing inks, lubricants, food service ware, and other products made with a minimum percentage of plant-based material (that typically replaces petroleum) (http://www.biopreferred.gov/BioPreferred)
- **WaterSense**, a program run by the U.S. Environmental Protection Agency that certifies water-efficient plumbing fixtures (http://www3.epa.gov/watersense)

Municipalities that are leaders in sustainable purchasing, including the City of Portland and Multnomah County, Oregon; San Francisco, California, Washington, D.C.; and New York City, have developed clear guidance for their municipal employees and vendors to utilize when making their purchasing decisions. USDN members and other municipalities may be able to follow these leaders' examples and/or work collaboratively with other cities, counties, or states/provinces to develop sustainable purchasing standards and specifications.

Examples of guidance that has been developed by other jurisdictions include:

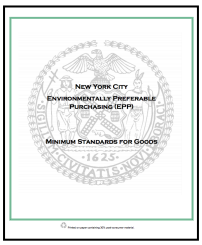
- **Washington, DC** adopted "Default Environmental Preference Standards" for all purchasing decisions, including procurements of materials, supplies, services, and commodities that:

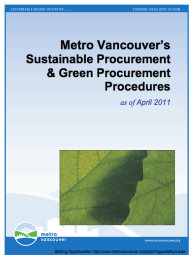
A. *Are available through the most current version of the GSA Environmental Specialty Category; or*
B. *Meet or exceed applicable performance standards or requirements of:*
    1. *The Federal Energy Management Program;*
    2. *The Electronic Products Environmental Assessment Tool Bronze rating;*
    3. *The U.S. Department of Energy's ENERGY STAR program;*
    4. *The U.S. Environmental Protection Agency's Comprehensive Procurement Guidelines; or*
    5. *(v) Verification of a project under the Leadership in Energy and Environmental Design (LEED) green building rating systems designed by the United States Green Building Council.*

In January 2015, Washington, DC also developed a *Sustainable Product and Service Specifications: User Guide*, which helps staff make sustainable purchasing decisions by providing "sustainable specifications for approximately 100 products across 14 broad product and service categories."[57]

- The **City of Ottawa, Ontario,** published a *Sustainable Purchasing Guideline* and accompanying *Toolkit* in 2013. These documents lay out definitions, responsibilities for Supply Branch employees as well as other Managers and staff involved in purchasing, and steps to follow. The *Toolkit* uses worksheets, checklists, and questionnaires to guide purchasing professionals at the City through a sustainability assessment of the prospective supplier (including a Total Cost of Ownership calculation), the inclusion of sustainability criteria and questions in bid solicitation documents, and the evaluation and rating of bids on a sustainability basis.

- **New York City** Mayor's Office of Contracts created *Environmentally Preferable Purchasing (EPP) Minimum Standards for Goods*[58] to help City employees comply with its EPP laws. This document details standards City employees are required to follow when procuring appliances, electronics, HVAC and lighting equipment, plumbing fixtures, paper, and several other categories of products. This guidance manual is in the process of being updated, according to NYC procurement staff.





[57] District of Columbia, Office of Contracting and Procurement, *Sustainable Product and Service Specifications: User Guide*, January 2015, http://ocp.dc.gov/sites/default/files/dc/sites/ocp/page_content/attachments/UserGuide.pdf.
[58] City of New York, Mayor's Office of Contracts, *City of New York Environmentally Preferable Purchasing Minimum Standards for Goods*, June 2012 Update; http://www1.nyc.gov/assets/mocs/downloads/pdf/epp/nycepp_goods.pdf

- In April 2011, **Metro Vancouver, British Columbia,** a regional governmental entity in western Canada that represents the City of Vancouver and several surrounding jurisdictions, published a set of *Sustainable Procurement and Green Procurement Procedures*[59], to help promote consistency in this area.

- **Multnomah County, Oregon** created a green purchasing tool that has proven extremely effective – the development and use of a *Checklist for Sustainable Purchasing*,[60] which County employees must use when making large purchases (over $5,000). Purchasers are required to complete the checklist and describe any environmental specifications they used to purchase the product. If the buyer opts for a conventional product or service when a "greener" alternative was available, the buyer must explain why they chose not to purchase the environmentally preferable option.

- **San Francisco, California** requires City and County employees to use an *SF Approved List* to procure certain categories of products and services for which environmentally preferable alternatives are readily available at a reasonable price and meet the City's performance specifications. For more information about the *SF Approved List*, which is San Francisco's own directory of green products and specifications that is used by City departments, businesses in the region, and other jurisdictions around the country, visit **http://sfapproved.org**.

Many municipalities have created tools used to assess the sustainability attributes of potential suppliers. Some use a Sustainability Leadership Questionnaire to collect information on the sustainability of suppliers' own operations, the assessment of which would be considered in bid evaluations. Others have developed a Supplier Code of Conduct to hold vendors to a set of minimum ethical and labor standards.

The **City of Calgary, Alberta** uses both of these tools, and completed a thorough review and revamp of their leadership questionnaire in 2015 in order to ensure that it elicited meaningful responses from vendors. The questionnaire is now comprised of a mixture of yes/no and open-ended questions, along with requirements to provide verifiable evidence for most affirmative responses. These documents complement the mandatory or desirable product-specific standards that are inserted into bid solicitations, and provide a more complete picture of the sustainability impacts of a particular procurement.

Best Practice #4

Implement an effective sustainable purchasing education and outreach program.

Effective sustainable procurement programs often include a coordinated and on-going staff and vendor education and outreach initiative. Important elements include the creation and dissemination of educational tools, staff training and the maintenance of a comprehensive website where employees and vendors can learn about the municipality's sustainable purchasing program.

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[59] Metro Vancouver, *Sustainable Procurement and Green Procurement Procedures*, April 2011; **http://www.metrovancouver.org/bids/Bidding%20Documents/MetroVancouverSustainableGreenProcurementInformationPackage.pdf**

[60] Multnomah County, *Sustainable Purchasing*; see link for Sustainable Purchasing Check List; **https://web.multco.us/purchasing/sustainable-purchasing-checklists-0**

Some jurisdictions require staff to participate in sustainable procurement education events and activities, while others offer incentives for staff to do so.

There are several key internal audiences that require training for a successful sustainable purchasing program:

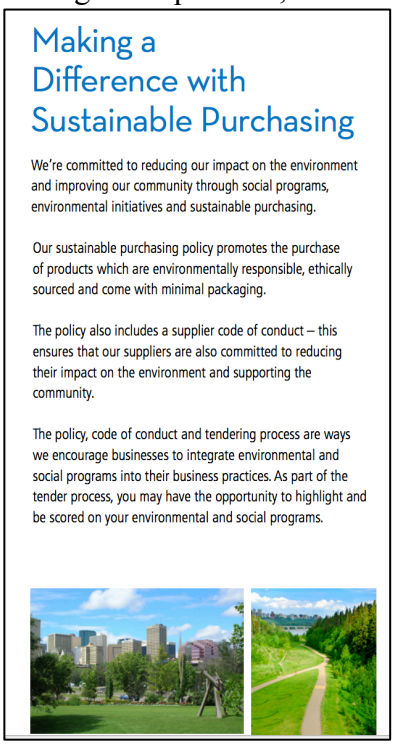
- **Procurement and sustainability staff** can work together to create bid solicitation documents for high-priority purchases for their jurisdiction. They need to understand the principles of sustainable purchasing, and how to apply the tools and procedures that the jurisdiction develops.

- **Executive and finance staff** are involved in creating strategies, plans, and large RFPs, and must be aware of how the jurisdiction is utilizing its procurement function to work toward sustainability goals.

- **Purchasing card holders or administrative and ordering staff** make many small purchases with little or no centralized control. These staff members need to understand how they can keep sustainability in mind in a purchasing scenario.

- **Vendors** and potential contractors need to understand how your jurisdiction's sustainable procurement program works and how they can support it. Approved vendors can also provide training to purchasing agents and other municipal employees that are likely to using their contract.

Typically, the best approach is to provide these groups with some training and education that fits their needs on an ongoing basis, rather than one large training session with no opportunity for follow-up. A blended learning approach can be particularly effective, whereby staff members complete short eLearning courses or attend webinars at their desktop, in addition to attending some periodic, interactive training. This training is particularly important as the program gets up and running, but continues to be relevant over time as new priorities develop and especially when new tools are rolled out. Additionally, some local governments conduct outreach to vendors while others allow – or even require – vendors to educate staff about the sustainable products and services they offer either during the bidding process or contract period.


Making a Difference with Sustainable Purchasing

We're committed to reducing our impact on the environment and improving our community through social programs, environmental initiatives and sustainable purchasing.

Our sustainable purchasing policy promotes the purchase of products which are environmentally responsible, ethically sourced and come with minimal packaging.

The policy also includes a supplier code of conduct – this ensures that our suppliers are also committed to reducing their impact on the environment and supporting the community.

The policy, code of conduct and tendering process are ways we encourage businesses to integrate environmental and social programs into their business practices. As part of the tender process, you may have the opportunity to highlight and be scored on your environmental and social programs.

Case Study: Vancouver, BC Trains City Employees to Use Its Sustainable Procurement Tools

In 2015, the **City of Vancouver** in British Columbia, Canada ran two training sessions for each of the teams in their Supply Chain department to educate them on how to effectively use the updated set of sustainable procurement tools that were developed by the City. This ensured initial familiarity by staff and resulting in better uptake and proper utilization of the tools.

Case Study: Edmonton, AB Train Administrative Staff

At the **City of Edmonton**, 2015 sustainable purchasing training activities have focused on administrative staff, who make spot purchases and order supplies. The Procurement department partnered with the Communications department to hold an all-day drop-in session – that included a booth dedicated to sustainable purchasing – that was attended by about 400 administrative staff. At this event, Procurement also rolled out a *Sustainable Catering Guide* it had recently created to help administrative staff making better choices when ordering food for City functions and facilities. Rolling out the guide in a formal way at the training session presented in a direct way to the staff who would make use of it. It also made the workshop valuable and current.

Edmonton also has taken steps to educate its vendors about its sustainable purchasing policy and its supplier code of conduct by including about it in the City's brochure, *Selling to the City: A Guide for Edmonton's Business Community* (see brochure excerpt to the right).[61]

It is important to note that some cities and counties have found that educating all staff to increase participation in a largely voluntary sustainable procurement program can be highly resource-intensive and costly. Instead, they have begun imposing some mandatory green purchasing requirements, which all departments must follow, particularly when purchasing recycled-content and energy-efficient products. By offering only green products on their contracts that meet performance standards and are cost-effective (such as recycled-content paper and EPEAT-qualified computer equipment), they reduce their need to continually encourage end users to choose among sustainable and non-sustainable options on their contracts and improve the effectiveness of their program.

However, training and education still plays a large role both internally and externally. First, to ensure that those who are developing bid solicitations and crafting contracts understand when and how to meaningfully consider sustainability. And second, that vendors are aware of the jurisdiction's sustainability goals and considerations, so that they can become partners in sustainable purchasing activities.

Municipalities that are considered leaders in sustainable procurement also develop and maintain an up-to-date sustainable procurement website for employees to use as a reference when making purchasing decisions and for vendors to use when responding to bid solicitations. The website provides easy access to the jurisdiction's sustainable procurement policy (and related policies), standards, model specifications and other bid solicitation documents, case studies, current sustainable procurement action plan, progress reports, environmental and cost calculators, educational presentations (PowerPoint slides and/or videos), lists of approved vendors and products, and other implementation tools.

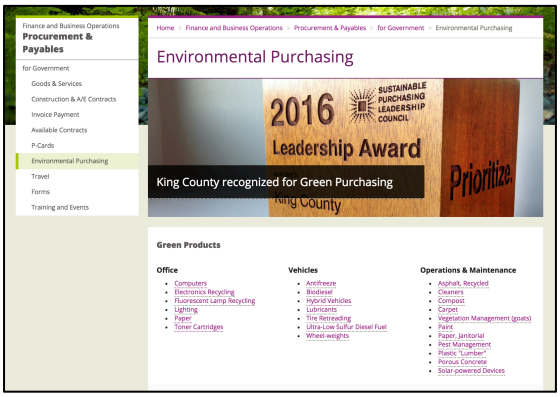
The website can also be used as a vehicle for publicizing the City or County's sustainable procurement plans, progress reports, and success stories. Some jurisdictions even use their sustainable procurement website to help businesses in the community learn how to practice sustainable procurement and identify acceptable standards as well as environmentally and socially responsible products available from local vendors.

[61] City of Edmonton, BC, "Making a Difference with Sustainable Purchasing," *Selling to the City: A Guide for Edmonton's Business Community*, undated brochure; **https://www.edmonton.ca/business_economy/documents/PDF/Selling_to_the_City_Brochure.pdf**

Several municipalities that are leaders in the sustainable purchasing arena have developed and maintain comprehensive and effective sustainable procurement websites. Below are some examples of model sustainable purchasing websites:

- **King County, Washington's,** *Environmental Purchasing* website is arguably the most extensive municipal sustainable procurement website in the U.S. It features:

  - **Policies**, including the County's Environmental Purchasing Policy[62], Green Building Policy, and other relevant policies that impact environmental purchasing. The website also links to all of the sustainability plans that County employees and vendors need to follow when making purchasing decisions or supplying goods and services to the County. This includes the County's 2007 *Climate Plan* and its updated 2010 *Energy Plan*.



  - **Products**, including fact sheets on over 20 types of environmentally preferable products that the County currently has on contract. Each fact sheet describes the specifications used to procure each product and the benefits each green product provides (sometimes with links to environmental and economic benefits calculators).[63]

  - **Annual Reports**, including links to the County's annual sustainability report, which has a section dedicated to environmental purchasing, and to a supplemental report published by the County's Environmental Purchasing Program, which provides more detailed information about the accomplishments and impacts of its green purchasing activities during the prior year.[64]

  - **Resources**, including links to guidance documents; government programs, organizations, standards, third-party certifiers, and environmental benefit calculators.[65]

- **Portland, Oregon** has also developed a comprehensive sustainable procurement website *Buying Green: Sustainable Procurement at the City of Portland* provides easy access to a wide array

[62] King County, Washington. http://www.kingcounty.gov/depts/finance-business-operations/procurement/for-government/environmental-purchasing.aspx
[63] King County, Washington. www.kingcounty.gov/operations/procurement/Services/Environmental_Purchasing/Products.aspx.
[64] King County, Washington. http://www.kingcounty.gov/operations/procurement/Services/Environmental_Purchasing/Annual_Reports.aspx
[65] To view a full list of the Resources listed on the King County website, go to http://www.kingcounty.gov/operations/procurement/Services/Environmental_Purchasing/Resources.aspx

of resources that can help employees and contractors learn about the City's sustainable procurement policies, program, and achievements. The website features:

- **Policies** including, notably, the City's *Sustainable Procurement Policy, Sustainable Paper Use Policy,* and the City Code that details its sustainable purchasing policies and procedures. It also provides links to related policy documents such as the City's *2030 Environmental Performance Objectives*, *Climate Action Plan, Renewable Fuels Ordinance, Green Building Policy*, and *Toxics Reduction Strategy*.

- **Progress Reports** including links to several Procurement Services Annual Reports and Green Spend Snapshots;

- **Specifications** including excerpts of the City's solicitations that were issued over the past few years for environmentally preferable products and services such as LED traffic signals, eco-roofs, water conservation devices, sustainably-farmed native plants, and integrated pest management services. Also provided are examples of solicitations issued by Portland City bureaus for conventional products to which environmental specifications were added, such as task chairs, uniform cleaning devoid of perchloroethylene, graffiti and paint removal services with certified low-toxicity chemicals, and elevator modernization services in which energy-efficient lighting and sustainably managed wood paneling products were installed.

- **Buying Green Case Studies**, which currently profile a dozen sustainable procurement projects undertaken by various City bureaus. According to the City's website, "each case study discusses the scope of the purchase, benefits, costs, performance, and lessons learned." The case studies include products and services that are highly energy-efficient, water-efficient, less-toxic than conventional products, made with recycled content, or feature renewable energy technologies.

San Jose, California promotes the benefits and accomplishments of its green purchasing program in a video, which is posted on **YouTube**.[66]

Best Practice #5

Track and report sustainable purchasing activities, accomplishments, and impacts.

A growing number of municipalities that have well-developed sustainable procurement programs track and publicly report their activities and impacts. Ideally, this includes a systematic process for monitoring implementation of the jurisdiction's green purchasing policy, provide an overall picture of its purchasing activities and impacts, and identify areas for improvement.

Some local governments receive a green spend report from its major vendors (often available for office and hardware supplies). These provide a useful summary of purchasing activities that helps

[66] City of San Jose EPP video, **https://www.youtube.com/watch?v=HbmiAVfBH3Y**

municipalities track the effectiveness of their green purchasing efforts relating to these product categories. This information can be included in periodic Sustainability Reports and used to identify departments that are doing the best (and worst) job at purchasing environmentally preferable products and services. Unfortunately, there is often a significant amount of spending that is not similarly tracked – particularly decentralized purchases that are made outside of local government contracts.

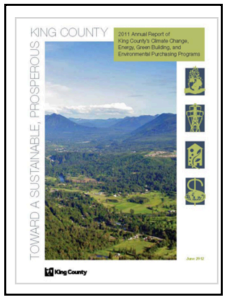
Several municipal green purchasing leaders are monitoring the activities of their green purchasing programs, including their environmental and cost impacts. They are typically tracking:

- ***The number of contracts*** that included sustainability criteria in bid solicitation documents and/or in the bid evaluation process.
- ***The dollar amount*** of the sustainable goods and services purchased (often on an annual basis) as well as the cost impacts compared to conventional products (including those with lower initial costs as well as reduced energy, maintenance, and/or disposal costs). Some jurisdictions require their vendors to report green spend information as a condition of their contract.

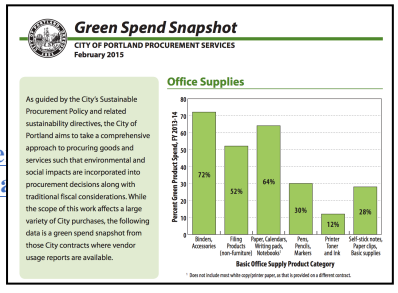
- ***The environmental benefits*** of their sustainable procurement activities such as greenhouse gases and other pollutants avoided; reductions in the consumption of energy, gas, water, trees, and other natural resources; and materials diverted from trash incinerators and landfills due to their reusability, durability, recyclability, compostability, and/or recycled content. These benefits can sometimes be documented using environmental calculators.

Examples of municipalities that are tracking their green purchasing program activities and impacts include:

- **San Francisco, California** tracks and reports the environmental impacts of its green purchasing activities every year, which is required under its *Precautionary Purchasing Ordinance*.[67] A unique aspect of San Francisco's program is that it tracks how well City employees have done purchasing *SF Approved* goods and services.
- **King County, Washington's** *Environmental Purchasing Program* summarizes its green purchasing activities and impacts in its annual Citywide sustainability progress report.[68] Highlights from the 2015 annual report include reaching a 57 percent compliance rate for purchasing 100 percent recycled paper (twice the 2014 rate) and implementing green building reporting requirements for concrete.



- **Portland, Oregon** reports on its sustainable purchasing efforts in its *Procurement Services Annual Report* as well as in other sustainability-related progress reports. Occasionally, the City will will also issue stand-alone *Green Spend Snapshots*. These *Snapshots* include both



[67] City of San Francisco, California. http://www.sfenvironment.org/downloads/library/20110614_09_annual_report_gree

[68] King County, Washington. http://www.kingcounty.gov/depts/finance-business-opera government/environmental-purchasing/reports.aspx

the percent spent on green products in certain categories and their associated environmental impacts. For FY2013-14, for example, the City of Portland reported that 52% of its paper purchases contained 100% postconsumer recycled content and 47% contained 30-50% postconsumer recycled content; this saved 1,378 trees and reduced greenhouse gas emissions by 54 metric tons of CO_2 equivalent.[69]

More information on tracking and reporting sustainable procurement activities and impacts can be found in *Chapter 7: Tracking and Reporting Sustainable Procurement Results*.

Best Practice #6

Participate in external sustainable procurement activities, including high-impact cooperative purchasing initiatives with other jurisdictions.

Encouraging staff to participate in external activities designed to share information with other jurisdictions and/or engage in cooperative purchasing activities (either by requiring vendors to allow for piggybacking off of their contracts for green products and services or offering such contracts to be used by cooperative purchasing organizations such as US Communities). Other common external sustainable procurement activities include networking with and outreach to other jurisdictions and businesses within and outside the community.

Fort Collins, Colorado has engaged in external green purchasing activities. For example, in October 2011 Jim O'Neill, the Director of Purchasing and Risk Management, gave a presentation on the City's environmentally preferable purchasing program at a Business Innovation Fair. This presentation is now posted on YouTube.[70] Recently, several Colorado-based municipalities have begun participating in a collaborative sustainable purchasing initiative that includes the City of Denver and other jurisdictions in the region.

Portland, Oregon gives bidders extra points in the bid evaluation process if they allow other jurisdictions to utilize their price agreement with the City. They have also partnered with the State of Oregon, Multnomah County, and others on sustainable purchasing contracts.

Santa Monica, California has created an interactive website that enables the public (as well as City employees) to take a virtual tour of a green workplace. Users can click on graphics of products used in each room to learn about their environmental and cost impacts as well as the cost benefits, performance, and availability of green alternatives

[69] City of Portland Procurement Services, *Green Spend Snapshot*, February 2015; http://www.portlandoregon.gov/brfs/article/422187

[70] Jim O'Neill Presentation on *Environmentally Preferable Purchasing* at the Business Innovation Fair; October 13, 2011; http://www.youtube.com/watch?v=m-gqL0g7Y1I

such as recycled paper, remanufactured toner cartridges, and high-efficiency toilets. This resource was developed by the City as a tool for promoting green purchasing by local businesses and the general public.[71]

San Francisco, California's *SF Approved List* is used extensively by businesses in the community (including those that are certified by the City's green business program) as well as by jurisdictions nationwide. Product categories include art supplies, automotive products, cleaners and cleaning supplies, electronics, lighting, office products, and more.

The green purchasing staff from many jurisdictions have participated in activities to promote stronger standards (e.g., commenting on proposed environmental standards) or to educate other jurisdictions about their successful program or activity by speaking on webinars hosted by the Responsible Purchasing Network, responding to requests on EPPNet (a green purchasing listserv), sharing resources via Canada's Municipal Collaboration for Sustainable Procurement, or participating in the technical advisory committees of the Sustainable Purchasing Leadership Council.

RPN
Responsible Purchasing Network
SUSTAINABLE PURCHASING LEADERSHIP COUNCIL
FOUNDER

[71] City of Santa Monica, California. www.smgov.net/Departments/OSE/greenOffice/

Chapter 5: Setting Sustainable Procurement Priorities

This chapter presents common reasons why local governments set sustainable procurement priorities and highlights best practices for selecting sustainable procurement priorities and developing a sustainable procurement strategy action plan. It also describes tools and resources for priority setting.

INTRODUCTION

Each year, cities and counties manage hundreds – if not thousands – of contracts for goods and services. Each of these procurement activities represents an opportunity to make the jurisdiction's operations and suppliers more sustainable. However, not all opportunities to make a contract more sustainable are equal in terms of:

- Environmental, health, social, and economic benefits and
- The amount of effort required to develop and execute it.

According to the Municipal Collaborative for Sustainable Procurement (MSCP), "Municipalities] have realized…that more time and resources spent in setting relevant goals and focusing on a few action priorities equals more success."[72] Nevertheless, many have failed to concentrate on setting strategic goals because of:

- Limited staff capacity;
- Limited experience in setting sustainable procurement goals that are specific, measurable, action oriented, and time based; and
- The need for staff to learn how to approach goal setting.[73]

WHY SET SUSTAINABLE PROCUREMENT PRIORITIES?

Local governments can become overwhelmed if they attempt to green every purchasing decision. Moreover, if they focus on relatively low-impact sustainable procurement actions, they may miss – or have insufficient resources to pursue – high-impact opportunities. Since many municipal governments are operating with limited staff resources, particularly within their procurement departments, it is very important for them to identify and undertake sustainable procurement actions that are likely to result in the "biggest bang for the buck" and are more strategically aligned with their overall sustainability goals.

Accordingly, a growing number of cities and counties are incorporating a priority-setting process into

[72] Reeve Consulting, *Commissioned by the Municipal Collaboration for Sustainable Procurement*. *The Annual Report on the State of Municipal Sustainable Procurement in Canada: Trends and Best Practices*. March 2013. https://reeveconsulting.files.wordpress.com/2011/05/trends-report-2012-print_final.pdf

[73] Municipal Collaboration for Sustainable Procurement.

their sustainable procurement program. This process brings together sustainability champions and other important stakeholders within the jurisdiction to plan their most important sustainable procurement activities over a specific period of time.

A review of local governments that have conducted a sustainable procurement prioritization process reveals the following five best practices:

1. Creating a cross-functional team to undertake sustainable procurement prioritization and planning.

2. Identifying internal and external policy drivers that will influence the sustainable procurement priority-setting process.

3. Conducting a spend analysis to identify the sustainability "hot spots" associated with your procurement of goods and service.[74]

4. Reviewing contracts to identify and prioritize upcoming sustainable procurement opportunities.

5. Developing a sustainable procurement action plan that lists your high-priority sustainable procurement activities over the next one- to three years.

The best practices for priority setting used by USDN members and other local governments are described in detail below.

BEST PRACTICES

Best Practice #1

Create a cross-functional team to undertake sustainable procurement prioritization and planning.

As a first step in their sustainable procurement prioritization process, many cities and counties establish a cross-functional (multi-departmental) team to identify, assess, and prioritize sustainable purchasing opportunities using a variety of criteria. A jurisdiction's priority-setting process is often coordinated by its procurement director in partnership with its sustainability program manager.

Ideally, the priority-setting process will engage a broad group of stakeholders, including representatives of departments with large operating or capital budgets such as facilities, finance, fleets, grounds, parks and recreation, public works, transportation, and utilities. Other facilities that may fall under municipal control such as airports, community colleges, correctional and health care facilities, and schools can also be included in the jurisdiction's sustainable procurement priority-setting process.

[74] Note: Some municipalities include capital contracts (e.g., contracts for the construction of buildings, roads, and other infrastructure) in their sustainable procurement programs) while others do not.

In some cities and counties, the jurisdiction's sustainable procurement policy defines the roles and responsibilities of various staff for setting sustainable procurement priorities. For example:

- **Seattle, Washington's** *Sustainable Purchasing Policy* directs its Purchasing Services Department to collaborate with its Office of Sustainability and the Environment, Seattle Public Utilities, and other Departments to "establish a green team to advise, strategize and promote environmental purchasing."[75]

- **Calgary, Alberta** included language in its *Sustainable Environmental and Ethical Procurement Policy (SEEPP)* relating to the establishment of sustainable procurement targets. It states that Finance and Supply will "establish environmental performance objectives and targets in support of the City of Calgary's ISO14001 Environmental Management System."[76]

- **New York City's** environmentally preferable purchasing law requires the Director of Environmental Purchasing to "submit an annual report to the Speaker of the Council and the Mayor by October 1 of each year detailing the City's progress in meeting the purposes of this chapter, which call at a minimum include…an identification of any product for which new or additional environmental purchasing standards are necessary."[77]

- **Portland, Oregon's** *Sustainable Procurement Policy* states that "City Bureau Directors are responsible for integrating Bureau-specific sustainable procurement goals into Bureau Sustainability Plans."[78]

Municipalities that are identifying sustainable procurement priorities typically work with their cross-functional teams to:

- Identify the most important sustainability policies and goals that are driving their sustainable procurement prioritization process.

- Articulate the outcomes they hope to achieve from implementing its sustainable procurement priorities.

- Decide on the timeline for the priority-setting process (i.e., how long the process will take and the length of time the prioritization plan will cover, usually between one and three years.)

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[75] City of Seattle, Washington. *Sustainable Purchasing Policy*. Modified 2008. **http://www.seattle.gov/Documents/Departments/FS/PurchasingAndContracting/Purchasing/green_SustainablePurchasingPolicy.pdf**

[76] City of Calgary, Alberta. *Sustainable Environmental and Ethical Procurement Policy*. March 12, 2008. **http://www.calgary.ca/CA/city-clerks/Documents/Council-policy-library/cfo008-Sustainable-Environmental-and-Ethical-Procurement-Policy.pdf**

[77] New York City. *Local Law No. 118: To Amend the Administrative Code of the City of New York, in Relation to Environmental Purchasing and the Establishment of a Director of Citywide Environmental Purchasing*. 2005. **http://www.nyc.gov/html/mocs/downloads/pdf/epp/EPP_LL118_2005.pdf**

[78] City of Portland, Oregon. *Sustainable Procurement Policy*, September 2010 Update. **http://www.portlandoregon.gov/shared/cfm/image.cfm?id=204110**

- Define the types of procurement activities that will be analyzed.

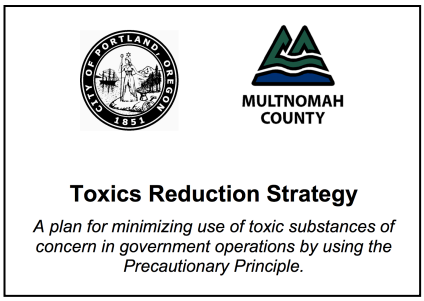
Below are descriptions of several cities in the U.S. and Canada that have engaged a wide range of stakeholders to facilitate their prioritization and planning process:

- The **District of Columbia's** Office of Contracting and Procurement (OCP) received a Sustainable DC Innovation Challenge grant in 2014, which enabled it to undertake a systematic review of its contracts and identify high-impact opportunities for making them more sustainable. The District kicked off this effort with a meeting that included all of its department heads. It also consulted with more than 75 program managers and contract administrators responsible for purchases in more than 14 major product and service categories. With the help of a consultant, a cross-functional, multi-department committee identified and evaluated opportunities for making the District's contracts more sustainable across a wide range of products.

  The Committee used a prioritization process that favored categories of products that have potential environmental and economic benefits, including, notably, those with third-party certifications that have been determined to be credible by the U.S. federal government (e.g., ENERGY STAR for electrical equipment, WaterSense for plumbing fixtures, and EPEAT for electronics). The District selected more than 40 initial product and service categories for which sustainability specifications and procurement guidance for employees and vendors were then developed. By mid-2016, the District developed environmental specification guidance for 90 product and service categories.

- Soon after **San Francisco, California** adopted its pioneering *Precautionary Purchasing Ordinance* in 2005, the San Francisco Department of the Environment invited all City and County departments as well as advocates and other community members to participate in a public meeting to choose its first list of purchasing priorities for reducing toxic chemicals of concern. Based on this prioritization process, which included a detailed internal review (with support of a technical consulting team) and broad stakeholder engagement, the City chose to focus on implementing a Citywide green cleaning program, developing specifications for low-mercury lighting equipment (including disclosure requirements), and creating contracts for environmentally preferable electronic equipment and e-waste recycling services.

- Some cities undertake their sustainable procurement priority-setting process in conjunction with other local governments such as neighboring counties. For example, the **City of Portland** and **Multnomah County, Oregon** developed and implemented a joint *Healthy Purchasing Initiative*, which prioritizes the elimination of toxic chemicals of concern in the products and services used by these two jurisdictions.[79] This initiative is built on a prior *Toxics Reduction Strategy*, a plan for minimizing use of toxic substances of concern in government



[79] City of Portland, Oregon. *Resolution No. 36958 to Reaffirm the City's Commitment to Sustainable Procurement by Adopting the Healthy Purchasing Initiative in Collaboration with Multnomah County*, 2012; http://www.portlandoregon.gov/brfs/article/424856

operations by using the Precautionary Principle.

Collaborating on the priority-setting process can help set the stage for cooperative purchasing activities such as sharing specifications and jointly issuing bid solicitations.

Best Practice #2

Identify internal and external policy drivers that will influence the sustainable procurement priority-setting process.

One of the first things a sustainable procurement priority-setting team can do to identify priority areas of focus is to determine whether there are any sustainable procurement activities that can help it comply with federal, state, and local laws and regulations. Involving your environmental or legal department can help your team understand whether your jurisdiction is out of compliance with any laws (e.g., federal clean air or water regulations), or whether any new laws were recently adopted (or are expected to be adopted) that would warrant attention in your sustainable procurement prioritization plan. Examples include statewide climate or zero waste/recycling goals or local restrictions on chemicals or materials of concern such as mercury, toxic flame retardants, pesticides that are harmful to honeybees (e.g., neonicotinoids), or polystyrene food service ware.

Some cities have prioritized sustainable procurement initiatives after an environmental incident or compliance issue occurred. For example, shortly after elevated levels of polychlorinated biphenyls (PCBs) were discovered in the Spokane River's water, sediment, and fish, the **City of Spokane, Washington,** undertook a targeted sustainable procurement initiative aimed at avoiding the purchase of products (such as traffic paint, snowmelt products, and packaging material) that are likely to contain these highly persistent and toxic chemicals.[80] The City prioritized the testing of products for PCBs and passed **an ordinance** directing City employees to give preference to the purchase of products that are free of PCBs.[81]

Next, the prioritization team should determine whether the jurisdiction has already established sustainable procurement or sustainability goals that apply to municipal operations. Important places to find these goals are in your jurisdiction's sustainable procurement policies and sustainability plans. Engaging policy-makers such as staff from the office of the mayor or city manager or a representative of your city or county legislature can help ensure that your priority-setting team is aware of all of the most relevant internal policy drivers.

Below is a brief explanation of how your jurisdiction's sustainability polices and plans can inform your sustainable procurement action planning process. For more a more detailed overview of sustainable procurement policy drivers, see *Chapter 3: Developing a Sustainable Procurement Policy*.

Sustainable Procurement Policies

As mentioned in Chapter 3, many cities and counties in the U.S. and Canada have adopted sustainable

[80] City of Spokane, Washington. Public Works and Utilities, *PCBs webpage*. **https://my.spokanecity.org/publicworks/wastewater/pcbs/**

[81] City of Spokane, Washington. *PCB-free Product and Packaging Ordinance*. June 2, 2014. **http://srrttf.org/wp-content/uploads/2015/07/ORD-C35099-06-02-2014-SMC_City-of-Spokane-PCB-purchasing-ordinance.pdf**

procurement policies. Many of these policies set broad goals (such as reducing energy or water consumption or reducing waste) but are not very prescriptive. This leaves the priority-setting process to the discretion of the jurisdiction's procurement director, sustainability manager, or a multi-departmental team tasked with implementing the policy.

Some of these policies identify one or more specific high-impact sustainable priorities, which should be included in the jurisdiction's sustainable procurement action plan – at least initially. For example:

- **San Jose, California's** 2012 *Environmentally Preferable Purchasing Policy* (EP3) directs City departments to "ensure that at least 30% of direct purchases of food served in City facilities is locally grown and organic."[82] To meet this goal, the City has prioritized adding purchasing specifications and reporting requirements to its contracts for produce, dairy products, and other food commodities.

  San Jose's *Green Vision* outlines 10 goals for fostering economic growth, environmental sustainability, and enhanced quality of life to be met over a 15-year period. Many of these goals have sustainable procurement element. For example, one of the City's goals is to receive 100 percent of its electrical power from renewable sources by 2022. Since 2014, 30 solar energy systems have been installed at City facilities, generating 4.82 MW of clean energy. Another goal is to replace 100 percent of streetlights with energy-efficient lighting. To date, approximately 5,530 LED streetlights have been installed, saving the City more than 1.88 million kWh of electricity annually.[83]

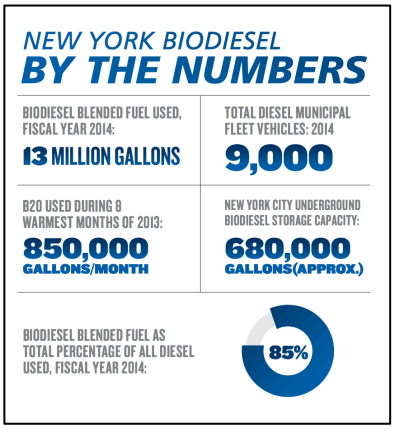
Some cities and counties have adopted laws and other types of policies that narrowly relate to the purchase of specific products such as bottled water, cleaning products, electricity, electronics, fleet vehicles, food, paper, pesticides, streetlights, and other products and services.

The priority-setting team should review these policies to identify high-impact sustainable procurement initiatives that can help their jurisdiction meet the policy goals and requirements. Below are some examples of municipalities where this has been done:

- **Portland, Oregon's** *Sweatshop Free Procurement Policy*, passed in 2008, requires apparel contractors that exceed the City's formal contract dollar threshold to comply with the City's Code of Conduct for Apparel Contractors.[84] Contractors that fall into this category, as well as their supply chain partners, must follow labor and health and safety standards that ensure workers are not subjected to sweatshop conditions**.** To demonstrate compliance, contractors must submit factory location information from suppliers providing apparel/uniform products to the City.[85]

[82] City of San Jose, California. *Environmentally Preferable Procurement Policy*. Revised April 24, 2012. **https://www.sanjoseca.gov/DocumentCenter/View/3862**
[83] City of San Jose, California. *Green Vision 2014 Annual Report,* **http://www.sanjoseca.gov/DocumentCenter/View/42557**
84 City of Portland, Oregon. *Sweatshop Free Procurement Policy and Code of Conduct for Apparel Contractors*. October 15, 2008. **http://www.portlandoregon.gov/citycode/?c=26882&a=218021**
[85] City of Portland, Oregon. Sweatshop Free Program Overview, **https://www.portlandoregon.gov/brfs/article/420366**

- In 2013, the **City of New York** adopted a law requiring all of its 9000 diesel-powered fleet vehicles (largely trucks used for garbage disposal, recycling and snow removal) to use fuel blended with biodiesel. The law mandates the purchase of a 5 percent biodiesel blend (B5) or higher by 2014, and a 20 percent or higher biodiesel blend (B20) during warm weather months by 2016.[86] According to the City's biodiesel supplier, 85 percent of the diesel fuel purchased in 2014 was biodiesel blended fuel, totaling 13 million gallons that year.[87]



Sustainability Policies

Sustainability policies are broader than sustainable procurement policies in that they often include a wide array of actions a jurisdiction can take to improve the sustainability of their community as a whole. Nevertheless, they often set sustainability goals for a municipality's operations, which can inform your sustainable procurement action plan. Below are some examples of cities that have undertaken a targeted sustainable procurement initiative in order to comply with their sustainability policy.

- In 2015, the Mayor of **St. Louis, Missouri** issued a Sustainability Executive Order that states the following: "The City of St. Louis's commitment to sustainability must begin at City Hall and other City-operated facilities, where City employees and constituents come every day. This Executive Order implements this vision by … mandating the use of sustainable cleaning supplies in City-operated facilities, and requiring the City to purchase sustainable products."[88] Shortly thereafter, the City prioritized implementation of a sustainable procurement initiative – including pilot testing – aimed at eliminating the City's use of toxic cleaning chemicals.

- In 2013, **Santa Clara County, California** incorporated a *Green Cleaning Policy* into its *Policies of Sustainability*. It states: "All cleaning products used within County-owned or operated facilities shall be certified by a nationally-recognized, third-party, certifying organization or the products must be approved by the procuring department as equal to the green-certified products, unless green products are unavailable, not cost-effective or not practicable." This policy is supported by the adoption of "Administrative Guidelines that detail purchasing and handling of green cleaning products and equipment, provide information on best practices, identify exemptions and note chemicals to avoid."[89]

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[86] "Bill Signed Requiring NYC Municipal Fleet to use Biodiesel Blends," *Biodiesel Magazine*, September 5, 2013; http://www.biodieselmagazine.com/articles/9309/bill-signed-requiring-nyc-municipal-fleet-to-use-biodiesel-blends

[87] Renewable Energy Group, Undated Case Study: *New York City is Ahead of the Curve*, http://www.nyc.gov/html/dcas/downloads/pdf/fleet/NYC_case_study_renewable_energy_group_2.pdf

[88] City of St. Louis, Missouri. *Executive Order No. 52: An Executive Order Implementing Parts of the Sustainability Plan Regarding Sustainable Practices in City-Operated Facilities and City-Permitted Special Events*. April 22, 2015. https://www.stlouis-mo.gov/government/departments/mayor/initiatives/sustainability/documents/upload/Executive-Order-52.pdf

[89] Santa Clara County, California. *Board of Supervisors Policy Manual, Policies on Sustainability*. Revised April 4, 2016. https://www.sccgov.org/sites/bos/Legislation/BOS-Policy-Manual/Documents/BOSPolicyCHAP8.pdf

Sustainability Plans

Over the past several years, a growing number of cities and counties have adopted sustainability plans, which typically lay out broad sustainability goals for their communities such as energy and waste reduction targets over a specific period of time. Some sustainability plans go one step further by identifying sustainability goals and recommended actions for the municipality's government operations. For example:

- **The City of Denver, Colorado's** *2020 Sustainability Goals* includes several government operations sustainability targets such as:
    - "Reduce energy consumed in city-operated buildings and vehicles by 20% while doubling renewable energy produced from city facilities over the 2012 baseline"; and
    - "Reduce emissions of federal criteria pollutants from municipal operations by 1.5 percent per year below the baseline year of 2012 or, if more stringent, to a level of full compliance with all federal, state and local laws relating to air emissions."[90]

Sustainable procurement teams can look for ways to help the jurisdiction meet the goals in their sustainability plans by prioritizing them in their sustainable procurement action plans. Below are examples of municipalities that have done this.

- Sustainability priorities at the **City of Vancouver, British Columbia** are driven by three key City strategic plans: the *Greenest City 2020 Action Plan*, the *Healthy City Strategy*, and the *Renewable City Strategy*.
- The **District of Columbia's** *Sustainable Purchasing Guidelines* were developed "to facilitate compliance with 15 environmental laws and regulations, 25% of the goals highlighted in the **Sustainable DC Plan**, and sustainable purchasing laws and policies which require that the District purchase environmentally preferable products and services to the maximum extent possible (**Mayoral Order 2009-60** , **D.C. Official Code Section 2-361.01**, **OCP Policy 7000.00**)."[91]

Climate Action Plans

Many cities and counties have developed (or are developing) a climate action plan (CAP) to guide the actions they will take to reduce environmental impacts from energy consumption and resulting greenhouse gas (GHG) emissions. The CAP targets can help the sustainable procurement priority-setting team develop a plan for their activities (e.g., increasing the jurisdiction's purchase of renewable energy and energy-efficient equipment).

The **City of San Diego, California,** for example, has adopted a *Climate Action Plan* that aims to

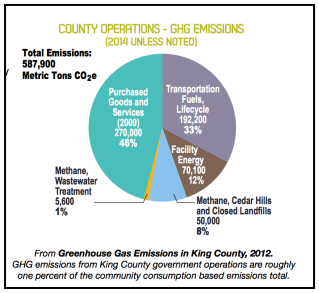
[90] City of Denver, Colorado. *2020 Sustainability Goals*. **https://www.denvergov.org/content/dam/denvergov/Portals/779/documents/2020%20Sustainability%20Goals%20071715.pdf**

[91] District of Columbia, *Sustainable Product and Service Specifications: User Guide*, January 2015; **http://ocp.dc.gov/sites/default/files/dc/sites/ocp/page_content/attachments/User%20Guide%20FINAL013015.pdf**

have 50% zero-emission vehicles in the fleet by 2020. That means about 2,100 vehicles need to be zero-emission vehicles, and fleet has implemented an **aggressive replacement plan** to replace its aging fleet." The City, which has also committed to electrifying 90% of its fleet by 2035, is also working to "determine vehicle utilization for electrification… and it must also expand EV charging infrastructure in order to meet its goal."[92]
Some CAPs are informed by a process called "carbon footprinting," which identifies the largest sources of carbon emissions within the jurisdiction. Local governments can utilize the results of their carbon-footprint analysis that relate to GHG emissions from government operations and capital projects to develop their sustainable procurement priority-setting process.

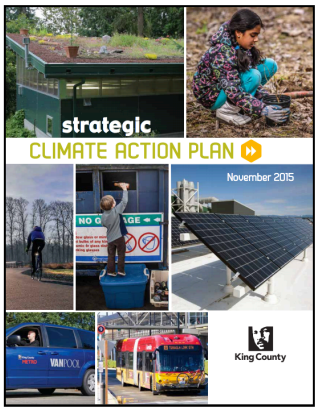
A handful of cities and counties have gone a step further by conducting a separate carbon footprint analysis of their municipal operations (separate from the footprint of the municipality as a whole, which also includes the operations of businesses, residents, and other non-public entities). This municipal carbon footprint has enabled local governments to hone in on several product categories that are contributing most to the climate impacts associated with activities such as municipal street lighting, transit services, wastewater treatment, building construction and renovation, etc.

Below are two examples of U.S. counties that have conducted carbon footprints of their operations and used the results to identify sustainable procurement priorities:



- **King County, Washington** conducted an inventory of the GHG emissions associated with its government operations in 2012. It revealed that the single-largest source of GHG emissions – totaling 46 percent or 270,000 metric tons – is "purchased goods and services."[93]

  The results of King County's GHG inventory informed the county's *2015 Strategic Climate Action Plan (SCAP)*, which includes "many county operations strategies … that will ensure that our purchasing practices will help us to minimize GHG emissions. These strategies include updating the internal environmentally preferable purchasing policy, recommending that workstation purchases are consuming the least amount of energy while meeting business needs, and maximizing the transition from individual computer servers to standard virtual environments (SVE) and increasing use of Cloud environments."[94]

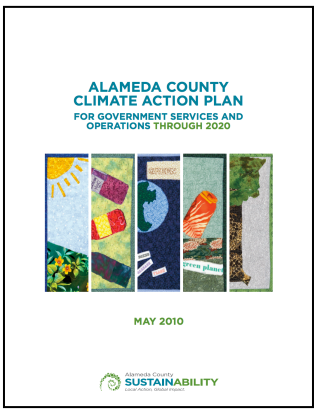


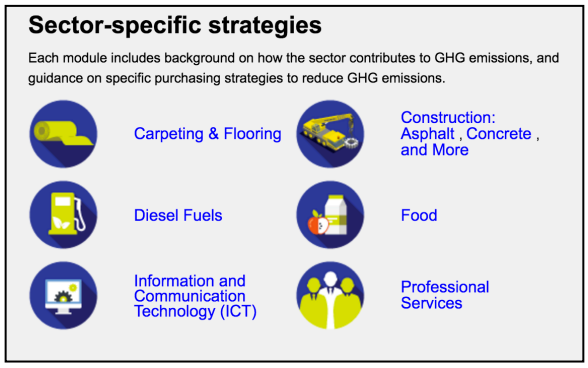
- **Alameda County, California** similarly conducted a carbon footprint of its municipal operations. Based on the results, the County included commitments to

[92] "Fleets Talk Green Procurement at California Vehicle Expo," *Government Fleet Magazine*, December 28, 2015; **http://www.government-fleet.com/channel/green-fleet/news/story/2015/12/san-diego-approves-climate-action-plan-for-green-fleet.aspx**
[93] King County, Washington. *Greenhouse Gas Emissions in King County, 2012.* **http://www.kingcounty.gov/environment/climate/climate-change-resources/emissions-inventories/2008-report.aspx**
[94] King County, Washington. *Strategic Climate Action Plan*. November 2015. **http://your.kingcounty.gov/dnrp/climate/documents/2015_King_County_SCAP-Full_Plan.pdf**

reduce major sources of GHGs from its fleet vehicles, buildings, and waste facilities in its 10-year *Climate Action Plan for Government Services and Operations Through 2020*. It also identified several sustainable procurement actions the county could take to reduce the climate impacts of its municipal operations, such as:

- Developing energy efficiency (and other sustainability) standards for electronic equipment purchased by the County;
- Purchasing locally grown food;
- Installing more efficient indoor lighting technologies and street lights (e.g., LEDs);
- Expanding the county's use of renewable energy to meet its 40% green power target;
- Increasing its use of fuel-efficient and alternative fuel vehicles in all County fleets, including hybrids or equally efficient vehicles for pool vehicles; and
- Working with vendors to minimize the packaging associated with county purchases.[95]





Both **Alameda and King Counties** are now participating in the West Coast Climate and Materials Management Forum. This network of public agencies has created a *Climate Friendly Purchasing Toolkit* designed to help local governments reduce the climate impacts of their purchasing decisions. The Toolkit addresses several product categories with significant climate impacts such as carpeting and flooring, construction products, diesel fuel, food, information and communication technology, and professional services.[96]

Best Practice #3

Conduct a spend analysis to identify the sustainability "hot spots" associated with your procurement of goods and services.

A growing number of government agencies, institutions, and businesses are informing their sustainable procurement priority-setting process by undertaking a "sustainability spend analysis." This process is designed to help a jurisdiction answer the following questions:

- *What are we buying?*
- *What are the most significant sustainability impacts of these purchases?*

A sustainability spend analysis typically involves two steps:

[95] Alameda County, California. *Climate Action Plan for Government Services and Operations Through 2020*. May 2010. https://www.acgov.org/sustain/documents/climateactionplan.pdf
[96] West Coast Climate and Materials Management Forum. http://westcoastclimateforum.com/cfpt

1. Collecting information about the amount of money that a municipality spent on goods and services over the past year (or several years) and compiling it into specific "big bucket" categories; and

2. Analyzing this historical spending data to identify potentially significant environmental, health, social, and economic "hot spots" associated with the jurisdiction's products, services, and suppliers.[97]

The process can be detailed (and expensive) or streamlined. Below is a list of steps cities and counties can take to complete a sustainability spend analysis.

1. **Before conducting a sustainability spend analysis, discuss and scope the process.** Make sure that all stakeholders on your Sustainable Procurement Priority-Setting Team understand why and how you are conducting your spend analysis, the scope of your analysis, how much time and effort it is likely to take, and what you are planning to do with the results. Clearly define the end goals. Set a target start and end date for the project.

2. **Determine what tasks will be performed in-house versus by outside consultants.** If you are planning to use a sustainability spend analysis tool or service provider, select one that has experience working with a jurisdiction similar to yours. Interview and take advantage of training materials and workshops (including online webinars) offered by spend analysis service providers.

   Note: The Sustainable Purchasing Leadership Council (SPLC) maintains a list of spend analysis service providers. These companies can help cities collect and organize historic purchase data and use a variety of tools (such as life-cycle assessment databases, eco-label lists and environmental benefit calculators) to estimate the environmental, social, and economic "hot spots" associated with different product and service categories. This list can be accessed at ***https://www.sustainablepurchasing.org/spend-tools/****.*

3. **Identify what data are readily available from your financial system.** Make sure your spend data is available (or can be organized) in a format that works with the spend analysis tool(s) you are planning to use. Ask your finance or procurement director if the products offered on your commodity contracts, service agreements, or individual transactions (e.g., P-card purchases) have been assigned standard commodity codes (such as NIGP commodity codes or United Nations Standard Products and Services Codes), which can make your job easier. Otherwise, you may need to code them as part of this process. It is also important to know what types of reports your financial system can generate and whether it is tracking total contract size (i.e., encumbrances) or actual expenditures.

   Alternatively, ask (or require) your vendors to provide spend data in a format that is compatible with your spend-analysis process and tools or to conduct the sustainable spend analysis for your jurisdiction.

[97] For more information, go to Sustainable Purchasing Leadership Council (SPLC), *Guidance for Leadership in Sustainable Purchasing, V2.0*, 2016, available with SPLC membership; **https://www.sustainablepurchasing.org/blog/2016/06/28/splc-releases-guidance-for-leadership-in-sustainable-purchasing-v2-0/**

4. **Bundle together purchasing data into broad categories (big buckets).** You may want to separate the amount spent on products and services (such as janitorial supplies and services) since the dollar amounts for service agreements are likely to be dominated by labor costs. Doing so will also enable your priority-setting team to determine whether commodity contracts or service agreements play a more important role in each category.

Case Study: Somerville, Massachusetts' Four-Year Spend Report

The City of Somerville, Massachusetts, focused its spend analysis on a dozen product and service categories, comparing the relative amount of money spent on each category over a four-year period. See table below, which shows Somerville's highest-spend categories, including:

1. *Energy generation systems and/or power purchase agreements* ($13.4 million);
2. *Vehicles and transportation services* ($10.1 million);
3. *Road construction and maintenance* ($5.9 million);
4. *Food and beverages* ($4.3 million); and
5. *Electronic equipment and services* ($3.8 million).

Other categories the City tracked that came out lower on the list include janitorial supplies and services, promotional materials, lighting equipment, office supplies, hospitality and travel services, landscaping and pest control products and services, and carpeting and flooring.

Green Procurement, USDN Playbook Spend Analysis, City of Somerville, FY2010-2014

Spend Type	2010	2011	2012	2013	2014	Total
Carpeting and flooring		$ 30,917	$ 11,648	$ 29,119	$ 8,847	$ 80,531
Electronic equipment and service contracts	$ 66,111	$ 435,360	$ 581,002	$ 2,045,816	$ 629,153	$ 3,757,441
Energy generation systems and/or power purchase agreements	$ 148,422	$ 4,078,628	$ 3,903,386	$ 1,850,450	$ 3,423,302	$ 13,404,187
Food and beverages	$ 211,021	$ 953,420	$ 1,108,700	$ 1,059,168	$ 977,458	$ 4,309,766
Hospitality and travel services	$ 5,643	$ 42,744	$ 60,152	$ 52,553	$ 102,081	$ 263,174
Janitorial supplies and services	$ 2,053	$ 292,592	$ 297,332	$ 241,416	$ 248,903	$ 1,082,297
Landscaping and pest control products and services	$ 1,771	$ 28,221	$ 32,022	$ 17,564	$ 19,728	$ 99,306
Lighting equipment	$ 8,376	$ 134,510	$ 144,088	$ 84,228	$ 243,367	$ 614,570
Office supplies	$ 14,664	$ 118,837	$ 130,613	$ 158,692	$ 122,540	$ 545,347
Promotional materials	$ 31,381	$ 134,168	$ 193,232	$ 120,288	$ 148,108	$ 627,177
Road construction and maintenance	$ 581,965	$ 3,927,209	$ 367,311	$ 927,785	$ 46,865	$ 5,851,135
Vehicles and transportation services	$ 330,794	$ 1,491,090	$ 2,785,258	$ 4,125,431	$ 1,383,017	$ 10,115,590
Total	$ 1,402,202	$ 11,667,695	$ 9,614,744	$ 10,712,511	$ 7,353,370	$ 40,750,522

If possible, include data over multiple years to spot spending trends and data collection anomalies. Also, make sure you understand whether the data include usage by other non-city contract users. For example, **Boston, Massachusetts'** spend analysis identified food/food service as a high-spend category. However, a closer review revealed that most of the food purchases were made by the public school district, which was piggybacking on the City's contract. Purchases by non-city entities may need to be treated differently in your spend analysis and resulting sustainable procurement strategic action plan.

5. **Determine the sustainability impacts you want to analyze in your spend analysis.** Some of the sustainability impacts that are most commonly analyzed include climate impacts (e.g., greenhouse gas emissions, carbon footprint), energy or water usage, toxics usage, waste impacts, local/disadvantaged business purchasing, etc.

6. **Decide whether you want a quantitative or qualitative assessment of your historic spending.** A qualitative assessment is easier to undertake, while a quantitative assessment will take more resources and time.

    a. *Qualitative hot spot assessments* can be used to identify product categories that are likely to have high sustainability impacts based on experience and existing knowledge, but they do not attempt to quantify the impacts. For example, if your jurisdiction is looking for opportunities to reduce energy use, your qualitative assessment can determine whether your jurisdiction has been purchasing a significant number of fleet vehicles, computers, copiers and other energy-using products ,and if significant opportunities exist to improve the efficiency of your operations with future purchasing decisions.

    • *Quantitative hot spot assessments* typically rely on the use of input-output databases that are applied to specific product and service categories. It is important to understand that quantitative assessments can identify *potential* hot spots, but they do not indicate the specific impacts of the products your jurisdiction is purchasing. To determine – and potentially quantify – actual impacts of major procurement decisions, the jurisdiction must evaluate the products that were actually purchased.

The **Sustainable Purchasing Leadership Council (SPLC)** has identified the following *Steps for Conducting a Sustainability Spend Analysis*:

Step 1: Understand Organizational Priorities and Existing Levers for Change
Step 2: Determine Scope of Analysis
Step 3: Create a Shared Understanding of Spend Analysis Options
Step 4: Choose Methods, Tools and Responsible Parties
Step 5: Collect and Standardize Data
Step 6: Implement Analysis and Validate Results

Best Practice #4

Review contracts to identify upcoming sustainable procurement opportunities.

Once high-spend product and service categories are identified through the sustainability spend analysis, your prioritization team can identify contracts that represent significant opportunities for improving the sustainability of your operations. When choosing contracts to review, it is useful to develop a set of screening criteria since your jurisdiction may have negotiated hundreds – or even thousands – of contracts for goods and services.

Common criteria used to choose sustainable procurement priorities include the **relative amount of spending** on a category of goods and services, the **sustainability benefits** that would likely result from addressing the category, the **amount of effort** it would take to undertake the sustainable procurement

initiative, and the potential increase or decrease in **cost** for the product or service.

Below is a discussion of each of these important priority-setting criteria:

- Relative Amount of Spending. Big spending can often – but not always – point to big impacts. Municipalities can use the results of their spend analysis, which may identify – and attempt to quantify – potential environmental, health, social and economic "hot spots" associated with their major spending patterns. This can serve as a guide post to help the jurisdiction look for specific opportunities to improve the sustainability of their purchasing decisions.

  While many cities set priorities based on spending across an entire category in order to capture commodity contracts, service agreements, and decentralized purchasing activities (such as numerous individual transactions), others focus their sustainable purchasing assessments (and activities) on large individual contracts. For example:

  - The **City of Vancouver, British Columbia,** has concentrated on inserting its *Supplier Code of Conduct requirements* and *Vendor Leadership Questionnaire* as well as desirable sustainability clauses relating to GHG reductions, packaging waste, and socio-economic sustainability into large tenders (e.g., RFPs over $75,000).[98]

  - The **District of Columbia** applies its sustainable procurement standards to procurement actions with a value of $100,000 or more.

- Potential Sustainability Benefits. Sustainability benefits commonly included in the priority-setting process include reduction in energy and water consumption, minimization of GHG emissions and other air pollutants, avoidance of toxic chemicals of concern, waste prevention, and support for small, local, and disadvantaged businesses.

  The assessment of whether there are potential sustainability benefits that can be realized from adding sustainability criteria to a specific category of goods and services can be influenced by whether the product category has already been greened. For example, a jurisdiction's spend analysis may determine that its use of cleaning products is potentially a significant source of toxic chemical exposures because it is a high-spend product category. Therefore, the category may warrant further review. However, the actual impacts can only be confirmed by a more detailed review of the products purchased (including those used by cleaning service providers). If the spend analysis reveals that most or all government agencies have already switched to using certified low-toxicity cleaners, then a focus on this category may not warrant being included in your sustainable procurement action plan.

  The results of your priority-setting process will differ depending on the sustainability outcome that you choose. For example:

[98] Reeve Consulting, Commissioned by the Municipal Collaboration for Sustainable Procurement. *The Annual Report on the State of Municipal Sustainable Procurement in Canada: Trends and Best Practices*. January 2014. **https://reeveconsulting.files.wordpress.com/2011/05/state-of-the-nation-report-on-municipal-sustainable-purchasing-in-canada-2013.pdf**

- If your primary sustainability goal is to reduce toxic chemical use and exposures, then the priority-setting team may recommend actions related to procurement of cleaning products, pesticides, hand soaps, and other products that contain toxic chemicals.

- If your jurisdiction's primary sustainability goal is to reduce the amount of waste that it is generating, then the priority-setting team may recommend initiatives to reduce the use of paper, batteries, packaging, and disposable food service ware items.

The **City of San Francisco, California** uses its sustainable purchasing tracking information to influence its prioritization and planning process. In cases when a significant amount of unsustainable products are sold on a contract despite the prior addition of sustainability specifications, sustainability staff will sometimes include in their short-term priorities an outreach effort designed to improve compliance with the contract's sustainability requirements.[99]

- Ease of Implementation. Many of the cities interviewed for this project indicated that they prioritize contracts that are considered "low-hanging fruit" – that is, those for which sustainable alternatives:
  - Are widely available from multiple vendors;
  - Have demonstrated that they have equivalent or higher performance compared to conventional products; and
  - Have received third-party ecolabels verifying sustainability claims, which makes the bid evaluation process relatively simple.

  While focusing on low-hanging fruit may not yield the most impact, it can give your program momentum.

  Another factor that makes implementation relatively easy is the availability of market-tested bid specifications, especially those created by another municipality of a similar size. The availability of sustainable products and services (often at discounted prices) through an existing cooperative purchasing organization, or on a state or local government contract that your jurisdiction can utilize, can also make it a high-priority for action because the amount of time it will take to set up the contract is dramatically reduced.

  Alternatively, a product category may be considered difficult to address if the staff had a prior negative experience trying to transition to more sustainable options. If a significant amount of pilot testing is needed, the priority-setting team will need to ensure that it can be completed – along with the bid solicitation process – prior to the contract expiration date in order to be considered a short-term priority.

- Cost Impacts. Sustainable products and services that are available at competitive prices are considered an easy win. Moreover, when the sustainable option can offer a cost savings – particularly over a relatively short period of time – the sustainable procurement initiative can easily make it to the top of the priority list.

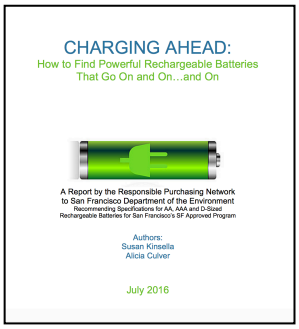
[99] RPN interview with Jessian Choy, San Francisco Department of the Environment, August 2015.

Projects involving the procurement of higher-cost products or services are less likely to be prioritized unless other benefits (such as health protection or compliance with an environmental law) are compelling. Sustainable products with a higher initial cost (e.g., LED lights, hybrid vehicles, and rechargeable batteries) can be prioritized when a life-cycle cost assessment demonstrates that they will save money over a reasonable amount of time. (To learn more about contracting strategies aimed at securing lower prices for sustainable goods and services, see *Chapter 6*.)

Sustainable procurement initiatives focused on reducing packaging waste have also been prioritized by many municipalities because they can lower disposal costs (as well as environmental impacts). **Palo Alto and San Jose, California**,[100] have adopted procurement restrictions on difficult-to-recycle packaging materials (notably polystyrene foam), while **Seattle, Washington, Portland, Oregon** and several municipalities in Canada have promoted the use of reusable totes in their contracts.

- Innovation. Occasionally, a municipality will decide to take on a sustainable procurement initiative simply because it is innovative. Such initiatives are typically designed to gain insight about the performance of a sustainable product or service that is just beginning to emerge in the market. By undertaking innovative sustainable procurement initiatives, local governments can position themselves as pioneering champions in the field and spur suppliers to offer new sustainable products and services.

  In 2016, **San Francisco** Department of the Environment commissioned RPN to develop specifications for high-performance rechargeable batteries, which promise to cut costs and reduce the City's waste impacts. The specifications are included in a report titled, *Charging Ahead: How to Find Powerful Rechargeable Batteries that Go On and On…and On*[101], which the two entities publicized in a webinar to dozens of other jurisdictions.



Prior to developing this *Playbook*, RPN surveyed participating cities to determine their upcoming sustainable procurement priorities with the following results:

- 100% identified janitorial supplies/equipment, office supplies, and vehicles as high priorities;
- 80% listed lighting equipment as a high priority; and
- 60% listed electronics, energy/renewables and landscaping/pest control as high priorities.

The **City of Calgary, Alberta,** has been actively prioritizing and planning its sustainable procurement work since its *Sustainable Environmental and Ethical Procurement Policy (SEEPP)* was being developed in 2007. The City promotes continuous improvement in and expansion of its sustainable procurement program by selecting specific categories of products and services on which to focus, and adding to these over time. Each category that Calgary chose was based on a combination of

[100] Responsible Purchasing Network. *Supply Chain Plastic Reduction Project*. **http://www.responsiblepurchasing.org/purchasing_guides/packaging/index.php**

[101] San Francisco Department of the Environment, Charging Ahead: How to Find Powerful Rechargeable Batteries That Go On and On…and On. July 2016; **http://www.sfapproved.org/sites/default/files/files/general-files/sfa_rpn_charging_ahead_july2016.pdf**

several practical and values-based (qualitative) criteria, including:

- *The possibility for immediate impact.* Categories that had contracts coming up for renewal in the next year or two.

- *Sustainability market readiness.* Categories for which sustainability opportunities and benefits have already been well-identified in the market, and where it was relatively easy to find products or services meeting the City's SEEPP standards; and

- *Notable perceived sustainability impacts.* Categories for which there was a determination of environmental and/or ethical impacts caused by the product or service (e.g., a significant amount of overseas production, climate impacts, toxic chemical exposures, etc.)

Using these criteria, Calgary selected four initial purchasing categories for the focus of its sustainable purchasing pilot test: chemicals, apparel, food, and cleaning services. To date, Calgary has selected 18 product categories to be addressed under its SEEPP program. In addition, it has been successful in including sustainability criteria into the majority of its RFPs in each chosen SEEPP category.[102]

In the United States, several cities have identified sustainable procurement priorities based on a similar *qualitative* assessment process. For example:

- In August 2015, **San Antonio, Texas,** evaluated its existing contracts – ranked by the dollar amount of the contract – to identify sustainable procurement opportunities for the coming year. Among the high-spend contracts targeted for sustainability action included food service ware, office furniture, printers, landscaping and janitorial services, food concessions, and electrical and hardware supplies. The City's sustainability director highlighted these and other sustainable procurement opportunities in a memo (and accompanying spreadsheet), which was sent to the City's finance director for approval.

- Staff from the **San Francisco** Department of the Environment and Office of Contract Administration (OCA) meet quarterly to update their list of sustainable procurement activities that they agree to jointly pursue over the coming 36 months based on likely sustainability outcomes and the purchasing department's contract bidding schedule.

A sustainable procurement priority-setting process can evaluate both commodity contracts and/or service agreements. The largest "sustainability bang for the buck" is often found in multi-departmental operating contracts for products and services that use large amounts of energy, chemicals, or materials as well as capital projects, as these often have significant environmental footprints. **Chicago**, **Illinois,** for example, is working on integrating sustainability considerations into its capital projects, including new building construction projects as well as water and transportation infrastructure projects.

The greatest opportunity to green a contract exists when it is being re-bid – or bid for the first time – because it can change what the vendors offer by including sustainability specifications and a green core

[102] Reeve Consulting. *Sustainable Purchasing Planning and Prioritization at the City of Calgary, AB, Canada*. August 2015. Unpublished.

list in the solicitation. Consequently, the prioritization process often focuses on contracts that are scheduled to expire. Nevertheless, cities can also look for opportunities to work with existing vendors to block unsustainable products from the list of items they are offering on your contract, increase the number of sustainable products in their offering, improve labeling and training to boost purchases of their sustainable products, or undertake other actions to increase the sustainability of their supply chain. A fruitful time to engage existing vendors in those conversations is often when the jurisdiction has an optional extension included in the contract. Therefore, contracts that are scheduled to be extended can also be considered in the prioritization process.

Best Practice #5

Develop a sustainable procurement action plan that lists your high-priority sustainable procurement activities over the next one-to-three years.

Once your sustainable procurement team has agreed on priorities, it is important to incorporate those priorities into a sustainable procurement strategic action plan and publicize it to your employees to ensure that the high-impact actions are being properly and fully implemented. Goal setting alone is not sufficient; communicating a clear message to implementing staff on where to focus their efforts is a necessary part of the process.

Important elements of a sustainable procurement action plan include the following:

- Identification of high-priority product categories – or large individual contracts – that your jurisdiction is committing to green over the coming one-to-three years;
- An overview of other sustainable procurement initiatives that your jurisdiction is planning to undertake in the near-term future such as staff training, vendor outreach, tool development, and other educational activities;
- A list of important milestones for each category including, for example, formation of a sourcing team, collection and review of baseline contract usage data, pilot testing (if necessary), development of specifications and other bid solicitation documents, contract award and roll-out;
- A timeline for addressing each high-priority product category so that contracting processes are not delayed;
- A list of key departments (or staff) that will be involved in each high-priority sustainable procurement initiative; and
- Tracking and reporting plans.

Your jurisdiction's sustainable procurement plan can be a stand-alone document. Below are several examples of cities that have created sustainable procurement action plans:

- After engaging with all of the City's five general managers and nearly 100 operational staff, the **City of Edmonton, Alberta,** developed a sustainable purchasing strategy called *Power of A*

Billion, which connects and guides its practice of sustainable purchasing to most of the City's key strategic plans.[103]

- In 2015, **Vancouver, British Columbia** created a *Sustainable and Ethical Procurement (SEP) Action Plan* – a document covering ongoing, new, and proposed SEP projects, including those that require leadership, buy-in, and support from other key business units. The plan identifies activities, expected outcomes, key steps, resource requirements, and links to the City's strategic priorities. It also highlights the range and breadth of SEP-related opportunities and commitments at both an operational and strategic level and allows for cross-departmental consultation and engagement to address resource needs and set priorities.

A sustainable procurement strategic action plan can be incorporated into your sustainability plan or annual report. Identifying high-impact sustainable procurement initiatives within your jurisdiction's overall sustainability plan can create support for dedicated resources and ensure that you are delivering on its sustainability outcomes. Below are several examples of local governments that have included sustainable procurement actions in their overall sustainability plan:

- **Chicago, Illinois'** *2015 Sustainable Chicago Action Agenda* lists several sustainable procurement initiatives the City has prioritized to take to reduce the environmental impacts of its operations such as installing 10 MW of renewable energy on City property, pilot testing water reduction technologies at City-owned facilities, replacing 3% of on-road fleet vehicles with green fleets annually, and reducing salt usage in all of the City's snow removal programs.[104]

- **Vancouver, British Columbia's** *Greenest City 2020 Action Plan* includes several sustainable procurement commitments. It states:

  One of the things heard loud and clear during the public engagement process was that the City needs to set an example in its own operations. Four high-priority actions in City operations have been identified in response.

  1. *Plan and implement a comprehensive corporate waste reduction and diversion program for all City facilities.*

  2. *Develop a procurement policy and practice that supports the purchase and use of local food in City-run facilities, including community centres and Park Board restaurants and concessions.*

  3. *Look for opportunities to green community events that the City runs, sponsors, and permits.*

[103] Reeve Consulting, Commissioned by the Municipal Collaboration for Sustainable Procurement. *The Annual Report on the State of Municipal Sustainable Procurement in Canada: Trends and Best Practices*. January 2014. **https://reeveconsulting.files.wordpress.com/2011/05/state-of-the-nation-report-on-municipal-sustainable-purchasing-in-canada-2013.pdf**

[104] City of Chicago, Illinois. *2015 Sustainable Chicago Action Agenda*. **http://www.cityofchicago.org/content/dam/city/progs/env/SustainableChicago2015.pdf**

4. *Plan and implement a program to significantly reduce greenhouse gas emissions as well as fossil fuel use in City-run buildings and vehicles, and achieve carbon-neutral operations.*

In addition, the Plan commits the City of Vancouver to "expanding public access to drinking water by deploying more portable fountains, as well as permanent freeze-resistant fountains, and water bottle filling stations, which "will help the city meet its zero waste target by discouraging the use of bottled water."[105]

Ideally, your sustainable procurement action plan will cover all of the high-impact purchasing activities your jurisdiction is planning to undertake. However, some action plans focus more narrowly on individual product categories or initiatives. Some local governments have developed sustainable procurement plans focused on individual product categories or outcome-specific procurement initiatives. This includes sustainable procurement action plans relating to a jurisdiction's fleets, electronic equipment, cleaning products, etc.

[105] City of Vancouver, British Columbia. *Greenest City 2020 Action Plan*. **http://vancouver.ca/files/cov/Greenest-city-action-plan.pdf**

Chapter 6: Creating Contracts for Sustainable Goods and Services

This chapter highlights a variety of best practices that USDN members and other local governments have used to create bid documents and set up contracts for sustainable goods and services. It presents various activities that are often part of the procurement process that that can be slightly modified to ensure sustainability is meaningfully considered and embedded throughout the contracting process.

INTRODUCTION

As local governments implement sustainable procurement programs, many are finding more efficient ways of securing contracts that offer sustainable goods and/or services to their employees at discounted prices. A review of these actions reveals a dozen different steps within the procurement process where sustainability is increasingly a consideration.

BEST PRACTICES

Best Practice #1

Convene a cross-functional sourcing team to develop a contract for sustainable goods or services.

The process of creating a contract-specific sourcing team can bring together the purchasing agent, staff from the sustainability office and the primary users of the contract. Early engagement of high-volume contract users can prevent agency pushback and promote contract utilization. The sourcing team is generally responsible for developing sustainability specifications and other bid solicitation documents, evaluating incoming bids to verify that they comply with the specifications, rolling out the contract to ensure that it offers products that meet the contract requirements and includes other contract sustainability terms and conditions such as green spend reporting, product take-back services, etc. Among the sustainability-related roles and responsibilities of the contract sourcing team includes:

- **Establishing the contract's sustainability goals**, which may include reducing the negative environmental, health and social impacts of the products or services on the contract (consistent with the jurisdiction's sustainability policies).

- **Reaching agreement on the design and implementation of the bid solicitation and evaluation processes** – for example, determining whether the jurisdiction will structure the bid solicitation as a Request for Proposals (RFP), which can award points in the bid evaluation process to vendors that offer sustainability services such as training on how to use their

sustainable goods and services, environmentally preferable packaging and transportation methods, and sustainability reporting.

- **Developing a contract schedule**, which may need to be longer than in prior years to accommodate the development of new sustainability specifications and more complicated bid evaluation procedures – especially if the contract is complex or if product pilot testing is needed. It is critically important for the contacting schedule to be developed upfront and for the sustainable procurement process to be factored into the contract development timeline.

- Identifying opportunities to aggregate demand so that fewer contracts need to be negotiated (and managed) and to secure more attractive pricing from vendors.

Case Study: The **City and County of San Francisco** has engaged its electricians, its environment and energy efficiency staff, and a technical consultant (RPN) on a sourcing team that has helped its procurement department (Office of Contract Administration) create contracts for environmentally preferable lighting equipment. This team has developed specifications that address the energy efficiency, rated life, and toxicity of the light bulbs, ballasts and fixtures that can be offered on its commodity contracts, taking into account the needs of the primary users of these price agreements, which include the airport, facilities, and the municipal transportation agency.

Similarly, San Francisco has convened its custodial supervisors, engaged its public health department, and hired a consultant to pilot test and create contracts for certified low-toxicity cleaning supplies and asthma-safe disinfectants. After the contract was awarded, the team focused on training to ensure a smooth transition to using these products.

For more information about these initiatives, contact Chris Geiger, San Francisco Department of the Environment at 415-355-3759.

Best Practice #2

Assess opportunities to use an existing contract to access sustainable goods and services.

With many local governments facing staff shortages and rapid turnover in their purchasing departments, one strategy they can sometimes use to save a significant amount of time and money is to access sustainable products and services at discounted prices on existing contracts that have been developed by another jurisdiction. Common places to look for these contracts include their cooperative purchasing organizations that allow local governments to utilize their contracts, municipalities that allow neighboring jurisdictions to "piggyback" on their contracts, and State Procurement Offices, which routinely make their contracts available to local governments in their state – and sometimes beyond. Below are examples:

US Communities is a government purchasing alliance that is used by thousands of cities, counties, school districts and other local governments to access a wide array of products at discounted prices. US Communities has a **Go Green Program** that promotes utilization of thousands of environmentally preferable products (EPPs) available on its contracts. Among the EPPs offered include LED lighting

equipment, certified low-toxicity cleaning products and paint, water-efficient plumbing fixtures, and more. For more information about this program, see **https://www.uscommunities.org/solutions/green-solutions/**.

Case Study: Santa Clara County Saved Time and Money Purchasing Re-Refined Motor Oil from City of San Jose

In 2009, Santa Clara County, California took advantage of a contract for re-refined motor oil that was recently created by the neighboring City of San Jose. Not only did this enable them to access this recycled product at a lower price than they were paying for "virgin" motor oil – saving them an estimated $40,000 annually – it also saved significant staff time eliminating the need to avoid going through the process of developing and evaluating bids.

Case Study: Commonwealth of Massachusetts Promotes Sustainable Products

Like many states, the Commonwealth of Massachusetts' has an Environmentally Preferable Purchasing Program that promotes its sustainable goods and services to cities, counties, and other local governments within the state. It promotes the green products on its contracts such as green cleaning products equipment and services, green building materials, fuel-efficient and electric vehicles, energy-efficient appliances and office equipment, recycled office supplies, and more. The state has published a *Guide to Recycled and Environmentally Preferable Products on Massachusetts State Contracts* to make it easy state agencies and other public entities in Massachusetts find these products.[106]

Best Practice #3

Scan other jurisdictions to determine if they have already successfully tackled this product category.

Don't reinvent the wheel. Assess the availability of model contracts from other municipalities that can be used as a model so that you don't have to start from scratch. These may provide you with sustainability specifications, vendor survey questions, green bid or "market basket" lists, and bid evaluation criteria for the product category you are interested in greening.

Several municipalities have posted model specifications on their sustainable procurement website. See examples below:

- **Washington, DC: http://ocp.dc.gov/page/district-columbia-sustainable-specifications**
- **Portland, OR: http://www.portlandoregon.gov/brfs/53454**
- **King County, WA: http://www.kingcounty.gov/depts/finance-business-operations/procurement/for-government/environmental-purchasing.aspx**
- **Alameda County**

[106] For more information, go to , go to **http://www.mass.gov/anf/budget-taxes-and-procurement/procurement-info-and-res/procurement-prog-and-serv/epp-procurement-prog/epp-resource-center/publications-and-other-resources.html#epp_public**

Best Practice #4

Evaluate historic contract usage data to determine what green products may be needed.

A review of your municipality's usage data will enable your Sourcing Team to identify high-volume items and high-usage agencies, assess the extent to which contract users are already purchasing the sustainable products and services offered on the contract, and identify opportunities for improvement.

Best Practice #5

Review the existing contract language.

It is important to review the existing contract language – including the original bid solicitation documents – to determine the types of products and services that were supposed to be offered, mandatory and desirable sustainability criteria, and the list of high-spend items that were on the bid sheet. This review process can help you determine whether the sustainability specifications are current and comprehensive and give you a place to start.

Best Practice #6

Assess the market.

Before finalizing specifications, it is important to determine the availability and performance of sustainable goods and service from local supplies. This can be done informally by interviewing vendors about the products they have with specific sustainability attributes or by evaluating their website. Alternatively, you can undertake a more formal process by inviting vendors in to demonstrate their products, or requesting information during the bid solicitation process or in a separate Request for Information (RFI).

When assessing the availability of sustainable products, the most reliable information is often third-party certifiers followed by product manufacturers. Distributors may have limited or outdated information about the sustainability attributes of the products they offer.

Other strategies for assessing the market include attending trade shows, reviewing trade journals, participating in external sustainable purchasing collaborations, and interviewing neighboring communities about their experience with sustainable products and services.

The **City of Edmonton, Alberta**'s Purchasing Department created out a *Sustainable Catering Guide*, to help administrative staff make more sustainable catering choices. To create the guide, Procurement surveyed 80-90 catering companies on all manners of sustainability concerns, receiving 55 responses. The guide was created with green leaves for each category in which the companies had some sustainability practices. It also included a checklist for after the company was chosen, to help staff to order more sustainable options from the menu.

Best Practice #7

Conduct a pilot test, if necessary.

Pilot testing products can help product users in your municipality identify products that meet their needs and performance requirements. Products that are commonly performance tested include cleaners, disinfectants, floor maintenance chemicals, paint, lighting equipment, electronic equipment, and vehicles. If you do not have the resources to conduct your own pilot test, you can look for results from pilot tests conducted by other local governments, states, or federal agencies. One place to start is to submit a question to EPPNet, a list-serve that is used by public purchasing agents across the US. For more information, see **https://nerc.org/projects/current-projects/eppnet-(environmentally-preferable-purchasing)-listserv**.

Case Study: City of Surrey, British Columbia (Canada) Ran Successful EV Pilot Test

In 2015, the City of Surrey undertook a project to replace retiring passenger vehicles with electric vehicles. The project began by identifying EV opportunities that would result in a positive financial return on investment and low operational risk of running out of charge – addressing the two main concerns staff had about EVs.

The City then conducted a pilot program by rolling out five EVs (Nissan Leafs) and tracking usage to ensure that it was falling within the ideal range. To lower the up-front costs, Surrey also elected to initially lease 4 of the 5 electric vehicles, rather than purchase them. The City also received $75,000 in program funding under the Green Municipal Fund, a granting pool offered by the Federation of Canadian Municipalities.

Surrey also contracted with a car-sharing service, which enabled them to downsize its fleet from 12 conventional gasoline-powered vehicles with low annual usage, to five electric vehicles with high annual usage. The switch to EVs resulted in fuel savings of approximately $6,000 annually ($100/EV/month) and CO_2 reductions of 230 kg/EV/month. Due to this successful pilot, the City will continue to expand the proportion of EVs in its fleet.[107]

Best Practice #8

Develop mandatory criteria for the bid solicitation, including references to credible third-party sustainability certifications and standards, when available.

Once your purchasing team has determined (through its market assessment) that there is a sufficient number of competing products that can meet a specific standard as well as your needs and performance criteria, you can reference the sustainability standard in your bid solicitation document. Examples include ENERGY STAR-certified light bulbs and EPEAT Gold-registered laptop computers.

In some cases, your team may determine – perhaps after conducting a pilot test, a needs assessment, and/or a total cost of ownership calculation – that a specific sustainable product (or product line) is what you want to specify. For example, if your facilities have installed equipment for concentrated cleaning

[107] City of Surrey, BC, Canada; *City of Surrey Energy Vision*, 2105; **http://energy-vision.org/ev-publications/ev_SR12_FINAL.pdf**

chemicals, hand soap or janitorial paper products that that only can accommodate specific brands, you may want to allow vendors to only offer products with that brand that are certified by either Green Seal or UL (under its EcoLogo standard) and that are compatible with your equipment.

In cases where there are multiple standards that your team determines to be equivalent (or acceptable because they achieve different goals), bidders can be allowed to offer products that meet at least one of the standards. Allowing products with competing certifications or standards can increase competition, which may increase the number of bids you receive. Below are two examples:

- Office supplies bid solicitations may allow bidders to offer pens that have at least 50% total recycled content or 30% post-consumer recycled content (both are available in the market), toner cartridges that are remanufactured and/or labeled "high-yield", and specialty paper products that either meet EPA's (CPG) recycled-content guidelines OR are certified by the Forest Stewardship Council (FSC).

- Because there are several (roughly equivalent) certifications for low-emitting furniture, bidders your solicitation may allow bidders to offer products that are EITHER certified to the UL GREENGUARD Gold OR SCS Indoor Advantage Gold Standard. It can also allow for products that can demonstrate that it certified to the same standard (California's 01350 testing protocol).

- Because two entities verify the compostability of food service ware, your bid solicitation can reference them both by allowing products to be either certified by the Biodegradable Products Institute (BPI) or on the Cedar Grove Composting Facility's List of Acceptable Products.

Mandatory sustainability specifications are not just relevant for the purchase of goods: they are also very useful when creating service contracts, and can help municipalities obtain a variety of benefits, such as the use of certified low-toxicity cleaning chemicals in a facility maintenance service agreement, the employment of underserved populations, etc.

Case Study: City of Vancouver, BC Requires the Use of Disadvantaged Business Enterprise
In 2014, Vancouver executed a contract for Graffiti Removal Services that incorporated a minimum number of hours of work (up to 10%) for people facing barriers to employment. The successful service provider has partnered with a local non-profit to successfully employ people with mental health issues, and 14% of the work is now performed by the non-profit's employees. Vancouver also requires contractors working on major facilities and engineering demolition projects for the City to divert waste from landfill and incinerator by reusing or recycling and to provide waste management tracking reports. This resulted in an average overall diversion rate of over 80% on City-contracted projects in 2013-2014.[108]

[108] City of Vancouver, *Annual Procurement Report 2014*, 31 March 2015; **http://vancouver.ca/files/cov/annual-procurement-report-2014.pdf**

Best Practice #9

Develop sustainability-related vendor survey questions.

If your municipality is planning to award points to vendors that can offer additional sustainability benefits when they are providing goods or services, a questionnaire can be incorporated into the bid solicitation package if it is designed to assess these "best value" practices or services (i.e., it is a Request for Proposals (RFP)). This may include for example:

- Experience providing onsite training about the sustainability attributes and proper use of their products
- The ability to provide a "green" spend report to your jurisdiction to assist with your tracking and reporting requirements
- The use of vehicles that have relatively low tailpipe emissions;
- Sourcing of their products locally, which can contribute to the local economy.
- Sustainable packaging methods; and
- Free collection and recycling of products that have reached the end of their useful life.

One time saving strategy includes developing a list of boilerplate sustainability questions that can be included in many – if not all – bid solicitations for goods and services.

Many municipalities have created tools to assist buyers or sourcing teams in formulating relevant sustainability-related questions, and help with subsequent evaluation of responses. These tools are a great starting point and can make it easier to identify the right types of questions to include in each bid solicitation. Below are some examples.

Case Study: Portland, Oregon Standard Corporate Responsibility Evaluative Questions for Professional, Technical and Expert Services (PTE) Solicitations

All Proposers shall address the following in their proposals:

a. Oregon State Certification
Please indicate in your response if your firm is currently certified in the State of Oregon as an MBE, WBE, or an ESB.

b. Minority, Women and Emerging Small Business Contracting

- If your firm is acting as the prime consultant or utilizing subconsultants on this project, please list the total project contract amount including scopes of work on Form 1(PTE Participation Disclosure Form).

- Points will be awarded based upon the maximum dollars contracted with State of Oregon certified M/W/ESB prime and/or subconsultants.

*Note: Failure to submit Form 1 with your proposal may result in the proposal being found non-responsive and may be rejected.

c. Workforce Diversity and Community Involvement

- Describe your firm's workforce demographics and any measurable steps taken to ensure a diverse internal workforce (e.g., women and people of color).

- How do you approach internal on the job training, mentoring, technical training, and/or professional development opportunities for women and people of color?

- Describe your firm's employee compensation structure, (e.g., living wages, healthcare coverage, employee leaves, dependent care, etc.).

- Describe your firm's commitment to community service, (e.g., charitable programs, scholarships, economic development, etc.)

d. Sustainable Business Practices

- List the top five actions/ongoing practices your firm has implemented to reduce the environmental impacts of your operations (e.g., energy efficiency, use of recycled content or non-toxic products, use of public transit or alternative fuel vehicles, waste prevention and recycling, water conservation, green building practices, etc.).

- Regarding your top five actions, please reference implementation dates, timelines, and any performance metrics or third-party awards/recognition (such as **Sustainability at Work**).

- Does your firm participate in any third-party sustainability related organizations, networks, or committees? If so, list up to five examples and how long your firm has been an active participant in each.

The **City of Ottawa**'s *Sustainable Purchasing Toolkit* includes a "Sustainable Purchasing Assessment Questionnaire." This tool asks a series of questions to determine the level risk or opportunity associated with the procurement at hand in terms of various aspects of economic, cultural, environmental, and social sustainability. Once this questionnaire has helped the user to discover which sustainability aspects are most important to the contract in creation, they can then use a second tool, which provides a menu of pre-created sustainability questions that can be adapted and included in bid solicitations in order to elicit information on particular sustainability aspects (e.g., for an energy-intensive product, the sourcing team might include, "Tell us how the design and use of your product or service will contribute to City strategies to increase renewable energy and/or reduce energy demand.").

Best Practice #10

Create pricing sheets that feature sustainable products and services.

If the bid solicitation uses a core or "market basket" list, this should be greened. To encourage vendors to offer their highest discounts on sustainable products, let them know that you are serious about purchasing large quantities of sustainable products by removing similar non-sustainable products from the bid or core lists. Make sure all of the products on your bid sheet comply with your new sustainability standards.

Best Practice #11
Evaluate bids.

It is important to verify compliance with mandatory sustainability criteria and assigning "points" to desirable sustainability criteria based on answers to vendor survey questions (if they were included in the solicitation). Just as your Sourcing Team verifies that the products that are being offered by each bidder meets the form and function that is required, it should confirm that the items on the bid list meet your jurisdiction's sustainability criteria. This will be a relatively easy task if you required sustainable products to be certified by a third party since certifiers often maintain a list of certified products.

When mandatory sustainability-related specifications show up in the bid solicitation, they are treated as any other specification, and the vendor is evaluated based on whether or not they can meet these specifications. Meeting such specifications does not award prospective vendors any points toward their overall score, but are simply a requirement that must be met if they wish to be considered for selection.

When a Vendor Sustainability Leadership Questionnaire was included in the bid solicitation package, each responsible vendor's answers will be scored in the bid evaluation process, alongside price, quality, and service. The best practice is to award 10-25% of the overall evaluation score to sustainability (e.g. 10-25 points out of 100 points), so that it remains a meaningful portion of the evaluation. Prospective vendors score points toward the sustainability line item, based upon their responses to the included questions pertaining to the products or services they are selling or to their internal practices (e.g., Vendor Sustainability Leadership Questionnaire).

Because it takes time to evaluate sustainability-related questions, some jurisdictions only evaluate bidders that meet the mandatory bid requirements.

In the **City of Ottawa's** *Sustainable Purchasing Toolkit* (introduced in Best Practice #9), each pre-created sustainability question that might be included comes alongside a suggested scoring guide, which provides potential "levels" of responses that might be received – ranging from no relevant information to the best response that has been imagined. Each of these levels has an associated percentage score (this can also be done with points-based scoring, e.g., 0-4 scale), which will be assigned to a vendor's response, based on where it falls on the spectrum.

An example of how sustainability questions might be scored to determine an overall sustainability score is provided in the table below.

Points Possible for SUSTAINABILITY: 20

Sustainability Questions to Vendors	Score Achieved:	Out of:
Sustainability Q1	4	4
Sustainability Q2	1	4
Sustainability Q3	3	4
Sustainability Q4	4	4
Vendor Leadership Questionnaire	12	16
Total Points	24	32
Percentage Point Score	75	100
Overall Sustainability Points Awarded	**15**	20

Best Practice #12
Consider creating an all-green contract.

Many municipal contracts negotiate prices for both green and conventional products and let contract users decide which items they want to buy. This sends a confusing message to vendors that they can sell City employees conventional (non-green) products whenever they ask for them. It also confuses buyers, who often do not understand why they should not be ordering products that are offered on their contracts. There are many benefits to negotiating contracts for all-green products:

- Municipalities can secure better pricing on sustainable products because vendors are selected based only on the prices they offer on sustainable products – and distributors are not required to stock conventional products along with sustainable ones.

- All-green contracts dramatically reduce the need for education because the approved products have been pre-selected for the end users. This underscores the need to involve the product users in the contract development process.

- All-green contracts make tracking and reporting simpler because all of the products offered count toward the jurisdiction's "green" spend. With conventional contracts, the tracking process is much more difficult because the purchasing departments must sift through a significant amount of data to determine which products count as sustainable, and which do not.

If an all-green contract does not seem practical, consider awarding the green products separately so that firms that offer only environmentally preferable products are not excluded.

Alameda County, California found that by creating all-green contracts for several targeted high-volume sustainable products, they were able to secure lower prices on these items, For example, its previous paper contract offered 30% post-consumer recycled paper at $35.32/case and 100% post-consumer recycled paper at $41.31/case. On their its new paper contract, which secured a volume discount for 100% post-consumer recycled paper, the price for this item dropped to $37.50.

Best Practice #13
Award contracts for sustainable goods and services.

Contracts for sustainable goods and services need to be carefully rolled out ensure that they offer only products that meet the sustainability criteria in the bid solicitation documents. Soon after the contract is awarded, it should be promoted to high-volume contract users. Over the term of the contract, compliance with the contract's sustainability requirements need to be monitored.

In some cases, particularly when a variety of end-users will be ordering off of the contract, it can be useful to automate some of the available choices, thus ensuring that staff are ordering products that meet your jurisdiction's mandatory or desirable sustainability specifications.

The **City of Edmonton, Alberta** worked with its office supplies vendor to ensure that, whenever a given product is searched for in their ordering database, an environmentally preferable alternative

automatically shows up as a suggestion.

Other organizations, such as the **Port of Seattle**, have worked with their office supplies vendor to ensure that the system disallows the ordering of products that do not meet their specifications (e.g., if an employee attempted to order virgin paper, the system would not allow the order to occur, and a more preferable copy paper alternative would be automatically substituted).

If your municipality creates a contract for sustainable goods or services, consider including a "me too" clause in the contract that allows other jurisdictions to use it.

ADDITIONAL RESOURCES

Responsible Purchasing Network, *Green Purchasing Opportunities and Best Practices* (2013), created with support from the National Association of State Procurement Officials (NASPO); **http://www.responsiblepurchasing.org/purchasing_guides/general_green/naspo_rpn_general_green_purchasing_guide.pdf**

Chapter 7: Tracking and Reporting Sustainable Procurement Results

This chapter explains why it is important for cities to track and report their sustainable procurement activities and results, recommends best practices cities can implement to collect and analyze their data, and provides examples of USDN cities that have had success tracking and reporting their sustainable procurement activities and impacts. It also provides tools and resources that can help make tracking and reporting easier.

WHY SHOULD MUNICIPALITIES TRACK AND REPORT THEIR SUSTAINABLE PROCUREMENT ACTIVITIES AND IMPACTS?

It has long been held that what is *measured* is what *matters*. While it can be one of the most challenging aspects of a sustainable procurement program, tracking and reporting is an essential element of a program's long-term success because it helps cities and counties to:

- ***Effectively make the case for a sustainable procurement program*** by demonstrating that it is helping them meet their sustainability goals such as reducing emissions of greenhouse gases and other pollutants from their facilities; avoiding the generation and disposal of waste; lowering their consumption of electricity, fuel, water, and paper; preventing employees from becoming exposed to toxic chemicals from cleaning and other maintenance operations; and supporting local, disadvantaged and "green" businesses.

- ***Convince mayors and other top-level city managers to devote more financial resources (including staff time) to the program*** by highlighting cost savings that have occurred as a result of purchasing goods and services that are more efficient and long-lasting.

- ***Demonstrate to policy-makers that the jurisdiction's sustainable procurement policy is being implemented***. Verifying compliance with environmental specifications and other sustainability requirements in their contracts can identify exemplary employees and vendors – as well as laggards. It can also uncover other compliance issues such as the failure of vendors to provide proper discounts.

- ***Gain credibility with the community by demonstrating how the jurisdiction is "leading by example"*** by highlighting how it has been able to successfully implement various sustainable procurement initiatives that businesses, institutions and the pubic are being asked to undertake as well;

- ***Qualify for sustainability awards, certifications and grants*** by demonstrating that their sustainable procurement program has yielded measurable environmental, health and financial benefits.

- ***Identify opportunities for improving the jurisdictions sustainable procurement program*** by showing where progress has been made and where more work is needed. This information can be integrated into your ongoing planning and prioritization process.

BEST PRACTICES

Best Practice #1

Include tracking and reporting requirements in your sustainable procurement policy.

It is important for cities and counties to make it clear to their employees that they are expected to track and report their sustainable procurement activities as well as the significant, measurable benefits that result such as energy and water savings, greenhouse gas reductions, and cost savings. The clearest way to do that is by detailing this requirement in the jurisdiction's sustainable procurement policy and/or administrative procedures.

Some sustainable procurement policies include tracking and reporting requirements.
This language is most helpful when it details the roles and responsibilities of various employees in carrying out this task.

The **City of Portland, Oregon's** *Sustainable Procurement Policy* states the following about data collection and performance reporting:

> *City Bureau Directors shall be responsible for:*
>
> - Cooperating in gathering information for the purposes of tracking, reporting, and evaluating the City's sustainable procurement activities; and
> - Integrating Bureau-specific sustainable procurement goals into Bureau sustainability plans.
>
> *The Chief Procurement Officer and the Director of the Bureau of Planning and Sustainability shall be responsible for:*
>
> - Collaborating on data collection for the purpose of tracking and reporting on the City's sustainable procurement activities and evaluating the effectiveness of this policy.
>
> *The Chief Procurement Officer shall be responsible for:*
>
> - Issuing an annual or biennial progress report on sustainable procurement activities and the effectiveness of this policy. This report may be a stand-alone report or integrated into a larger Bureau of Procurement Services report.[109]

[109] City of Portland, Oregon, *City of Portland Sustainable Procurement Policy*, September 2010 Update, http://www.portlandoregon.gov/shared/cfm/image.cfm?id=204110

Smaller jurisdictions or those with largely decentralized purchasing activities may need different policy language that delegates this responsibility primarily to the Chief Procurement or Sustainability Officer, with other agencies providing information about their sustainable procurement activities and impacts to these lead departments.

Best Practice #2
Develop a tracking and reporting plan.

The jurisdiction's tracking and reporting plan can identify the key performance indicators (KPIs) that the sustainable procurement team will track. These indicators should ideally sync with the sustainability goals listed in a jurisdiction's sustainable procurement policy, sustainability action plan, or other policy drivers. The tracking and reporting plan should identify the contracts and categories of products that will be tracked due to their potential to provide information about measurable sustainability benefits, such as electricity or water savings.

Other stakeholders including city or county employees, policy-makers, nonprofit organizations that focus on sustainability issues, vendors, and even the public can be invited to participate in your sustainable procurement metrics development process.

According to Canada's Municipal Collaboration for Sustainable Procurement, "After identifying monitoring and reporting as a key priority for 2013, many municipalities followed through with starting to develop key performance indicators (KPIs) in order to set targets and evaluate the progress of their sustainable purchasing programs and activities."[110]

One of the first questions that a jurisdiction needs to answer when it is developing tracking and reporting procedures is what counts as "sustainable" spend. Below are several sustainability criteria that cities and counties have used to track products and services with sustainability attributes:

- *Products with third-party certifications* – particularly those that are listed in the mandatory bid specifications or optional desirable criteria. This may include products that are listed on certification websites that are maintained by organizations including, but not limited to:
  - Biodegradable Products Institute (BPI)
  - Cradle to Cradle Innovation Institute
  - Forest Stewardship Council
  - Green Electronics Council, which operates the **Electronic Products Environmental Assessment Tool (EPEAT) Registry**
  - Green Seal, UL (EcoLogo and GREENGUARD)
  - Green-e Energy, Center for Resource Solutions
  - Scientific Certification Systems (Indoor Advantage and FloorScore)
  - US Environmental Protection Agency (ENERGY STAR, WaterSense, and Safer Choice)
  - USDA (BioPreferred and Organic)

[110] Reeve Consulting, *The Annual Report on the State of Municipal Procurement in Canada: Trends & Best Practices* – Commissioned by the Municipal Collaboration for Sustainable Procurement, January 2014.

- *Products with recycled-content* levels that meet the jurisdiction's procurement standards. These often mirror – and sometimes exceed – the US EPA's **Comprehensive Procurement Guidelines** for recycled content. Tracking products that meet the EPA's recycled-content guidelines can be relatively easy because many manufacturers note when the product is CPG-compliant, and some vendor's have tagged these products in their online ordering systems, making it easy to track them in their green spend reports.

  (It is important to note that some suppliers may label products as "environmentally preferable" when they contain recycled-content levels below EPA's CPGs. If you don't want those products to count toward your green spend, then you may need to create a customized tracking system. More information on creating a tracking template is provided below.)

- *Products with other sustainability attributes*. It is often more challenging – but not impossible to track the amount of products purchased that have other sustainability attributes (but lack third-party certifications) because the criteria may be less well recognized and, therefore, not incorporated into vendor or purchaser tracking systems. Examples of these criteria include low-VOC (paints), rechargeable (batteries), remanufactured (printer cartridges and furniture) and solar-powered (calculators and flashlights). If your standards are not recognized by your vendor, you may need to work with them to ensure that they are harmonized with yours.

- *Products that are supplied by local, disadvantaged or certified sustainable businesses*. Tracking the amount of products that are produced within a certain distance of your jurisdiction or that are certified by a local or regional green certification program is possible, but may present challenges because the definition of local may vary from jurisdiction to jurisdiction.

Successful tracking and reporting procedures will collect baseline data prior to making significant procurement changes or conducting widespread outreach so that jurisdictions can document the impact of specific changes in procurement activities.

Best Practice #3

Track your jurisdiction's sustainable procurement activities.

Tracking and reporting on sustainable procurement actions is sometimes the first step that a jurisdiction takes to demonstrate that it is making progress implementing its sustainable procurement policy. Although this type of tracking does not allow the jurisdiction to measure definitive outcomes from sustainable purchasing, it provides a great indication of whether the processes in place are being carried out in a consistent manner. This can include documenting:

- The number and dollar value of solicitations that included sustainability criteria. This relatively simple method of tracking enables the jurisdiction to measure whether they are implementing the processes that are described in their sustainable purchasing policy and procedures

for evaluating vendors on sustainability criteria. While adding sustainability language to a bid solicitation may not necessarily result in the creation of a contract that offers sustainable goods and services – especially if the language does not require some or all of the products on the contract to meet its criteria – it indicates that sustainability was weighted alongside other factors, and thus that it was an important part of the purchasing decisions made.

- The number of contracts that were created that offer sustainable goods and services at discounted prices. This performance indicator reflects what is ultimately offered on each contract. It is most relevant when the resulting contracts offer *only* sustainable goods and/or services since this means that there is not an option of foregoing sustainable options in favor of conventional products or services; however, it is still a strong indicator that sustainable products or services are being purchased by the jurisdiction.

  If the resulting contract offers *only* sustainable goods and services – such as recycled-content paper, LED lighting equipment, solar panels, certified green cleaning products, or compostable food service ware – then it is most likely to result in the procurement of these items because the jurisdiction is sending a clear message to its employees that it wants them to purchase these products and services using a convenient contract vehicle.

  Similarly, if service agreements require contractors to utilize only sustainable products, it is very likely that the establishment of such contracts will result in the use of compliant products (although the contracts do need to be monitored).

- Employee awareness of the jurisdiction's program. Some jurisdictions have attempted to assess the success of their sustainable procurement outreach efforts by surveying employees about their sustainable procurement policies, procedures and practices.

Case Study: Ottawa Tracks Sustainable Procurement in its E-Procurement System

The City of Ottawa, Ontario began tracking sustainable purchasing activities following the implementation of its *Sustainable Purchasing Toolkit* in 2013. During the creation of a bid solicitation at the City of Ottawa, employees use questionnaires, procedures, and information contained in the *Sustainable Purchasing Toolkit* in order to determine which sustainability pillars – environmental, social, economic, or cultural – are most important to the purchase at hand. If any sustainability issues are deemed important, they should be addressed in the bid solicitation.

"Included" means that there are either mandatory requirements, evaluated questions to the vendor, or a combination of both written into the bid solicitation that relate to the specific sustainability aspect. The City's internal IT department customized its existing SAP software to include a sustainability tracking feature, so that when Supply Management is processing any contract approval request, they are able to input which of the four sustainability aspects are being evaluated in that particular procurement. This allows the City of Ottawa to track the number (or percentage) and dollar amount of purchases that included meaningful evaluation of sustainability, and which pillars of sustainability were considered. Supply Management reports the dollar amount figure to Ottawa's City Council twice a year.[111]

[111] Interview with David Sloan, Manager, Strategic Sourcing, City of Ottawa, August 8th, 2016.

Washington, DC uses its e-procurement system to track the number of solicitations to which green specifications were applied. In cases where green specifications were not used, it also notes the reason given by the purchasing agent for not doing so. This tracking mechanism enables the District's sustainability team to understand which product and service categories have the most EPP contracts and which departments are using EPP contracts for the highest volume of spend. This knowledge helps them focus future training efforts on categories in which more EPP work is needed.

However, tracking spend at the level of a contract will not indicate how many green products were actually purchased, especially if the contract in question includes both green and non-green products. For service contracts, where dollars may be put towards a contractor's salary and insurance, estimating the impact of that spend may prove challenging. This suggests that use of e-procurement systems to track sustainable procurement activities may provide a necessary, if not sufficient first step towards tracking a jurisdiction's sustainable spend.

Best Practice #4

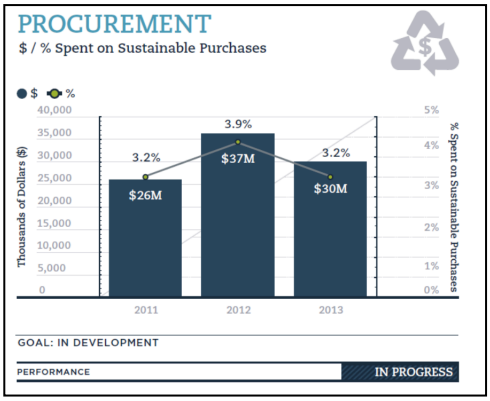
Track the amount of your jurisdiction's "sustainable spend."

Many cities and counties have moved beyond tracking their sustainable procurement activities to quantifying the impacts of these initiatives. This can include documenting and reporting the amount of money spent on sustainable products and services by the jurisdiction – often during the previous year. Some cities also highlight how the amount has changed over time, and calculate the percentage that it represents in relation to total spend in select categories or overall.

The challenges to tracking sustainable spend include collecting information that is detailed enough to determine what specific product was purchased, aggregating data from various sources so they are in a consistent format that makes it practical to analyze, and determining whether the products or services that were purchased met the jurisdiction's sustainability criteria. In addition, is it often necessary to separate the amounts spent on goods and services since the service contract dollar amounts often are dominated by a significant amount of labor costs.

Below is an overview of two strategies for tracking the amount of a local government's sustainable spend.

- Tracking spend by dollar amount
  Tracking the amount of money spent on sustainable goods and services is a common tracking strategy because it is a relatively easy way to assess progress that can be applied across product categories. In addition, the amount spent on specific products and services is often information that can be requested from the jurisdiction's vendors or extracted from its own accounting system. This information is usually collected over a defined period of time – such as a year – and can be monitored over time.



- Calculating the percentage of sustainable spend by dollar amount
  A growing number of cities assess how well their sustainable procurement program is doing by

comparing the amount spent on sustainable goods and services within specific categories to the total amount spent in those categories and calculating the percentage of "sustainable spend" in each category. Below are several examples of USDN-member cities that track their sustainable spend.

- **Austin, Texas** included in its 2015 sustainability report the amount of money the City spent annually on "sustainable purchases" over a three-year period. It also noted the percentage of the City's total spend that was determined to be sustainable. Austin is in the process of developing a goal for this Key Performance Indicator (KPI).[112]

- **King County, Washington** reported that it exceeded its 2013 goal of 50 percent renewable energy purchased or produced by reaching 52.4%.

- **Vancouver, BC** prepares an *Annual Procurement Report* for its City Council that includes highlights of results from their sustainable procurement activities. Many of the metrics tracked include dollar and percentage figures for sustainable purchases. For example, in 2015, Vancouver reported that 70-75% of janitorial supplies spend was on products that were EcoLogo or Green Seal certified. In the same year, Vancouver purchased services valued at $800,000 from 18 different social enterprises.[113]

Best Practice #5

Track the types and quantities of sustainable products your jurisdiction purchased.

While reporting dollar amounts of sustainable products and services is an important indicator of the success and growth of a local government's sustainable procurement program, it is also important for cities and counties to translate these sustainable procurement actions into the number of sustainable products it ended up purchasing so that resulting sustainability impacts can be calculated. Below are examples of USDN cities that are tracking the number of sustainable products they are purchasing in specific categories, which is then used to estimate environmental and financial benefits.

- **King County, Washington** tracks the number of hybrid vehicles it purchases on an annual basis. Using this information, it calculates and reports the percentage of their new bus and support vehicle purchases that are hybrids. King County's *2013 Annual Sustainability Report* reported that its Metro Transit department purchased 43 hybrid buses and four hybrid support vehicles, which represents 52% and 18% of the total purchases in each of these two categories.[114]

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[112] City of Austin, Office of Sustainability, *Organizational Sustainability: Key Performance Indicators*, 2015, http://austintexas.gov/sites/default/files/files/KPI_October2015_Final.pdf

[113] City of Vancouver, *2015 Annual Procurement Report.* http://vancouver.ca/files/cov/annual-procurement-report-2015.pdf

[114] King County, Washington, *2013 Annual Report of King County's Climate Change, Energy, Green Building, and Environmental Purchasing Programs*, June 2014, http://your.kingcounty.gov/dnrp/climate/documents/2013-King-County-Sustainability-Report.pdf

- The **City of Vancouver's** report to Council also includes metrics on the types and quantities of sustainable products it purchases. In 2013, the City purchased approximately 120,000 kitchen containers for collection and processing of food scraps. The containers were made of a minimum 50% post-consumer recyclable material and are 100% recyclable.[115] In 2015, 41% of all food, beverages and/or supplies purchased by Park Board concessions was local – raised, grown, produced or processed within BC. [116]

Best Practice #6

Track reductions electricity, fuel, water, paper and other materials your jurisdiction consumed from your jurisdiction's sustainable procurement actions.

Many cities and counties have adopted sustainability goals aimed at shrinking the environmental footprint of their operations, including reductions in electricity, fuel, water, paper and other consumable items as key performance indicators (KPIs). Several municipalities are taking the next step by tracking reductions of these KPIs that result from their sustainable procurement activities. Below are several examples of USDN cities that are doing this:

- The **City of Los Angeles, CA** Bureau of Street Lighting reported an annual savings of 100 gigawatt hours of electricity and GHG emission reductions of nearly 60,000 metric tons from retrofitting over 165,000 street lights with LED fixtures.[117]

- New vehicles and equipment acquired by the **City of Vancouver, BC** in 2015, including compressed natural gas refuse collection vehicles and fuel-efficient police patrol vehicles contributed to a reduction in City fleet GHG emissions of 200 metric tonnes.[118]

Best Practice #7

Track the environmental, health and other sustainability benefits of your jurisdiction's purchasing activities.

Increasingly, cities and counties are using calculators and other tools to quantify the environmental, health, social and economic benefits of their sustainable procurement actions. A common environmental metric that is measured is the quantity of greenhouse gas emissions (GHGs) that are avoided as a result of a specific sustainable procurement activity. Typically, GHGs reductions are associated with reductions in energy consumption.

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[115] City of Vancouver, *2013 Annual Procurement Report.* **http://vancouver.ca/files/cov/annual-procurement-report-2013.pdf**
[116] City of Vancouver, *2015 Annual Procurement Report.* **http://vancouver.ca/files/cov/annual-procurement-report-2015.pdf**
[117] City of Los Angeles, *Sustainable City Plan: First Annual Report (2015-2016)*, **http://www.lamayor.org/sites/g/files/wph446/f/landing_pages/files/pLAn%20first%20annual%20report%202015-2016_0.pdf**
[118] City of Vancouver, *2015 Annual Procurement Report.* **http://vancouver.ca/files/cov/annual-procurement-report-2015.pdf**

For example, the **City of Vancouver** reported on its website that recent efforts to upgrade its existing facilities have made them more efficient. Procurement has been responsible for a significant, measurable decrease in Vancouver's GHG emissions:

> *To reduce energy consumption, and lower the amount of greenhouse gases (GHGs) emitted by City facilities, lighting, building automation, and heating systems are being upgraded.*
>
> *Not only will these improvements reduce the harmful carbon emissions that contribute to climate change, they also make facilities cheaper to operate.*
>
> ***Thanks to recent improvements, City facilities have already reduced greenhouse gas emissions by 22% over 1990 levels.***[119]

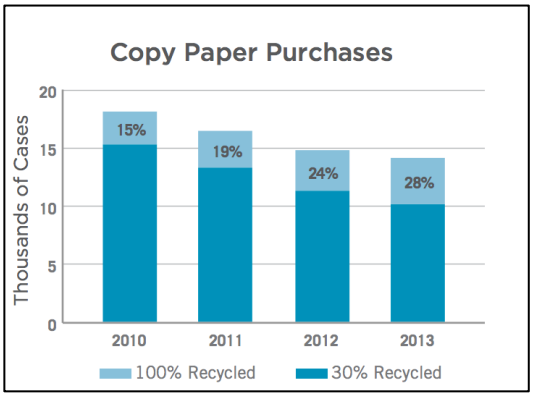
Best Practice #8

Track the financial benefits of your jurisdiction's sustainable procurement actions to make the business case for its program.

As noted in "Chapter 2: Making the Business Case for Sustainable Procurement", many cities and counties have documented and reported cost savings from their sustainable procurement efforts. Cost savings can be realized immediately – as in the case with remanufactured toner cartridges, which cost less per page while creating less waste.

Many sustainable products yield cost savings over time. For example, some sustainable products can help a jurisdiction reduce its consumption of electricity, fuel, water, paper and other consumable materials. Other sustainable products have lower replacement and installation costs because they have a longer lifespan or lower disposal costs because they create less solid or hazardous waste. By tracking results, sustainable purchasers can make informed decisions about which products and services to scale across citywide or countywide contracts.

King County, Washington, noted in its 2013 sustainability report, that it is "committed to reducing energy and resource use within its portfolio of facilities, vehicles, and through the services it provides. The County has aggressive policies and guidelines mandating energy and resource reductions, and employees are carefully monitoring progress."[120] It is important to note that energy, resource conservation and material reduction goals may be achieved by undertaking a variety of sustainability actions including purchasing more efficient products as well as educating employees and changing operational procedures. **King County** reported that it "reduced its copy paper usage by 21 percent between 2010 and 2013, achieving savings of approximately $209,860 over that period.[121]



[119] City of Vancouver "Green City Facilities; "2016 http://vancouver.ca/green-vancouver/green-city-facilities.aspx
[120] *2013 Annual Report of King County's Climate Change, Energy, Green Building and Environmental Purchasing Programs*, June 2014, http://your.kingcounty.gov/dnrp/climate/documents/2013-King-County-Sustainability-Report.pdf

This was facilitated by the purchase of multi-function imaging equipment that made it easy for staff to scan and email documents rather than printing them and requirements that printers and copiers be set to make double-sided copies as a default when hard copies were needed.

Best Practice #9

Require or encourage your approved vendors to provide data on the sustainability attributes and benefits of the products they sold to your jurisdiction.

Many large vendors have advanced purchase order tracking systems, which may offer cities an easier way to track sustainable purchasing results than trying to extract the data from their own computer systems. Vendors are often required to report contract usage data in order to verify compliance with other contract terms and conditions. Also, the vendor report can often be highly detailed, which enables cities to conduct a product-specific analysis comparing products sold by the vendor to the sustainability specifications that were included in the bid solicitation and/or contract.

Some local governments require a targeted list (or all) of their vendors to provide them with a "green" spend report – noting the dollar amount and/or percentage of sustainable spend that occurred over a specific period of time (often either annually or quarterly).

The **City of Palo Alto, CA**, for example, has a provision in its *Environmentally Preferred Purchasing Policy and Procedures* directing its Sustainable Purchasing Committee to establish "requirements for annual vendor reports on sustainable product purchases tracking dollars spent, units purchased, and other information as specified by the City."[122]

Several office supplies vendors can provide jurisdictions with a detailed report on the dollar amount and/or percentage of green office supplies they purchased. To incentivize sustainable purchasing, some companies even rank its jurisdictions' sustainable purchasing accomplishments.

In 2014, the **City of Chicago** was ranked #1 by its office supplies vendor and received a Green Purchasing Award as a result.

September 17, 2014

City Of Chicago Ranked Number One In Green Purchasing Award

Office Depot declares Chicago number one green purchaser in the country through 2013 Office Depot Green Purchasing Program

Mayor's Press Office 312.744.3334

The City of Chicago today was honored by Office Depot in Boca Raton, Florida for being number one in green purchasing. Thousands of local governments are evaluated as contenders for the award each year, and winners are selected based on exemplary leadership in greener and sustainable office purchases.

"Chicago is a national leader in making sustainable choices and we continue to set an example for other cities around the country to follow," said Mayor Emanuel. "This honor from Office Depot is just another indication that Chicago is well on its way to becoming the greenest city in the world, and shows our commitment to pursuing sustainable behaviors that better the city as whole."

The City of Chicago joined Office Depot's Green Purchasing Program in 2012, and within one year, Chicago emerged as the number one green purchasing local government in the country. Chicago was selected as number one for purchasing the highest percentage of green expenditures, including items that are recycled, remanufactured, energy-efficient, non-toxic or hold an eco-label. By 2013, Chicago's green spending with Office Depot was at 61 percent surpassing the now number two green spender, Roanoke, VA, by several points.

Municipalities may face a challenge aggregating data

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[121] *2013 Annual Report of King County's Climate Change, Energy, Green Building and Environmental Purchasing Programs,* June 2014, **http://your.kingcounty.gov/dnrp/climate/documents/2013-King-County-Sustainability-Report.pdf**

[122] City of Palo Alto, *Environmentally Preferred Purchasing Policy and Procedures (5-03/MGR)*, February 6, 2008, **http://www.cityofpaloalto.org/civicax/filebank/documents/32651**

from multiple vendors since it may be submitted in different formats. To encourage consistency in data submitted by multiple vendors, some have created reporting templates.

When vendors provide historical spend data, it is important for the Sustainable Procurement Team to review it to ensure that it is accurate and meaningful.

Vendors may count some products as "environmentally preferable" that have relatively *weak* sustainability attributes. For example, the product may have a very small amount of recycled content that is below the federal government's recycled content guidelines. The vendor may count products that have a single-attribute certification even though your specification calls for such products to have a multi-attribute certification. Two examples of this include:

- Desktop computers that are certified by the ENERGY STAR program for energy-efficiency but are not on the EPEAT Registry, which requires computer equipment to meet the ENERGY STAR standard AND have other environmental attributes such as recycled content or avoidance of toxic materials.

- Cleaning chemicals that are certified as "biobased" but lack a multi-attribute certification by Green Seal or another entity that ensures the product does not harm human health or the environment.

Perhaps, more importantly, cities may need to check vendor "green" spend reports to ensure that they do not include products that have *unsubstantiated* claims, including those with eco-labels that were created by the manufacturer.

More information on credible standards for sustainable products can be found in Chapter 5 of this *Playbook*.

For some categories, your team may want to set the highest standard possible to achieve the greatest positive purchasing impact. To do so, you will need to ensure that suppliers aren't able to use lower standards to count toward a jurisdiction's tracked "green spend".

Best Practice #10

Establish all-green contracts to make tracking and reporting much simpler.

Tracking the amount of money spent on a contract is often easier than tracking the amount of money spent on individual products and services. Since the process of determining what percentage of spending on a contract meets the specifications for green products can be time and labor-consuming, there are potential savings to be realized in the establishment of all-green contracts.

Alameda County, California negotiated a contract for 100% post-consumer recycled content copy paper. By creating a stand-alone all-green contract, they were not only able to lower prices on this environmentally preferable product, they created a simple way to track their purchases since the only product offered on this contract met their specification – so it all counted toward its "sustainable spend". Each year the County's avoidance of virgin paper prevents approximately 6,000 trees from being cut

down and reduces its greenhouse gas emissions equal to removing 200 cars from the road. Alameda credits these savings to its establishment of an all-green paper contract. This contract has also made it significantly easier to track the County's accomplishment from year to year.

Best Practice #11

Communicate the measurable results of your jurisdiction's sustainable procurement activities.

Tracking and reporting can be important in communicating the results of sustainable purchasing to key stakeholders, including purchasers, vendors and policymakers and residents of the jurisdiction. Many jurisdictions publish an annual sustainability report, which is an excellent opportunity to showcase improvements and lead by example.

Best Practice #12

Utilize your tracking results to plan future sustainable procurement activities.

Salt Lake City, Utah set a standard for purchasing hybrid vehicles in 2009. By tracking the cost of fuel consumption for hybrid vehicles purchased under this standard, Salt Lake's Sustainability Team was able to build a business case for purchasing additional hybrids and charging stations, which then enabled the purchasing of new electric vehicles to replace vehicles the burn fossil fuels.

This dynamic, where robust tracking efforts can build momentum for future sustainable acquisitions shows how properly tracked hybrid fleets can build ownership momentum for electric vehicles. By building the business case for alternative fuel vehicles, Salt Lake City was able to plan future sustainable procurement activities for their fleet that enabled even greater cost and emissions savings.[123]

ENVIRONMENTAL BENEFIT CALCULATORS

Environmental benefit calculators can make it easy to quantify the results of your sustainable purchasing decisions. For example:

- Environmental Paper Network's **Paper Calculator** quantifies the environmental benefit of purchasing recycled content paper, including savings of energy, water and wood consumption, air and water pollution and greenhouse gas emissions.
- **ENERGY STAR calculators** measure energy savings, cost savings and greenhouse gas emission reductions.
- **EPEAT's Electronics Environmental Benefits Calculator (EEBC)** quantifies the lifecycle environmental benefits of purchasing EPEAT-registered computers and monitors. EPEAT registration requires Energy Star-certification, as well as measuring a product's primary and toxic material usage and hazardous waste disposal liabilities.

[123]Tyler Poulson, USDN Playbook Member Call, 2015

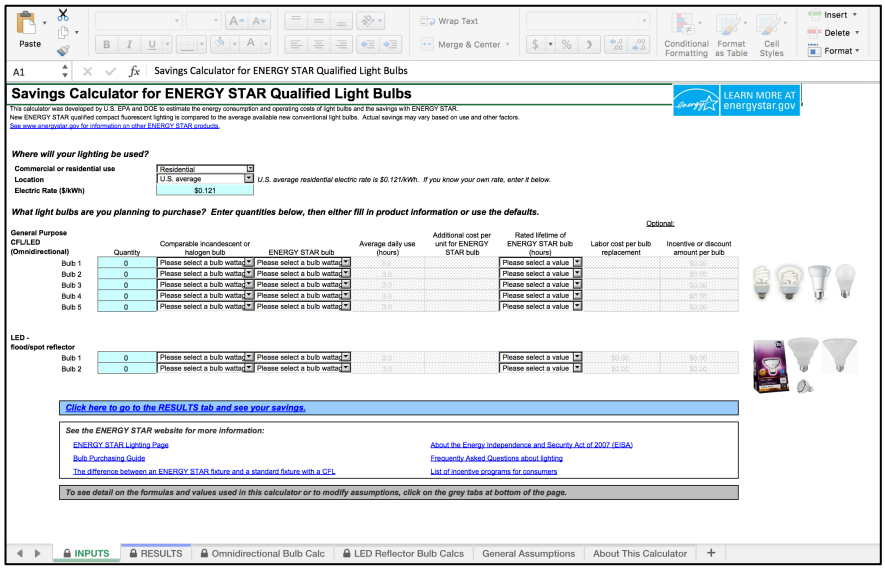
See details about these calculators below. For additional information about additional sustainable procurement calculators, which can be used to estimate cost savings and quantifiable environmental benefits, go to **http://www.responsiblepurchasing.org/purchasing_guides/all/calculator/**.

Recycled Paper Environmental Benefits Calculator

The purchase of recycled paper results in many environmental benefits because it takes less energy and water, and, obviously fewer trees to make it compared to non-recycled (virgin) copy paper. The **Paper Calculator,** is an innovative tool that enables users to calculate and compare the environmental impacts of different paper choices. Purchasers can use this calculator, which is maintained by the Environmental Paper Network, to compare the environmental impacts of copy papers with varying percentages of recycled content, including savings in wood, energy, GHG emissions, water and solid waste. Users can use this tool to assess and demonstrate the benefits of switching to paper products with a higher percentage of recycled content. Results are expressed in both standard measurements, such as tons of wood and gallons of water, and in easy-to-communicate terms such as trees saved and swimming pools of water conserved. See sample results, below, comparing virgin, 30% recycled and 100% recycled-content copy paper.

Clear Values, Start Again	Virgin Copy Paper	30% Recycled Content	100% Recycled Content
Paper	Uncoated Freesheet (e.g. copy paper)	Uncoated Freesheet (e.g. copy paper)	Uncoated Freesheet (e.g. copy paper)
Quantity	1 Tons	1 Tons	1 Tons
% Recycled	0	30	100
Wood Use	4 tons	3 tons 1 tons less	0 4 tons less
Net Energy	33 million BTU's	29 million BTU's 4 million BTU's less	22 million BTU's 11 million BTU's less
Greenhouse Gases	5,601 pounds CO_2 equiv.	4,981 pounds CO_2 equiv. 620 pounds CO_2 equiv. less	3,533 pounds CO_2 equiv. 2,068 pounds CO_2 equiv. less
Water Consumption	22,853 gallons	19,488 gallons 3,365 gallons less	11,635 gallons 11,218 gallons less
Solid Waste	1,922 pounds	1,697 pounds 225 pounds less	1,171 pounds 751 pounds less

ENERGY STAR LED Environmental Benefits Calculator



ENERGY STAR-certified LED light bulbs use 60-90% less electricity than an incandescent light bulk with equivalent light output. This Excel calculator estimates the energy, maintenance, operating, and replacement cost savings related to switching incandescent bulbs to ENERGY STAR light bulbs (LEDs, preferred). Estimates can be adjusted based on electricity rates, hours used per day, lamp wattage, and lamp lifetime in hours. Outputs are provided in cost and energy savings, payback time in years, and air pollution reductions, including equivalent cars taken off the road or acreage of forest saved.

Chapter 8: Sustainable Procurement in Action: Electronics

This chapter describes several best practices cities and counties can take to procure environmentally preferable electronics as well as ensure their safe management at the end of their useful life. It also highlights the successful efforts of USDN members and other local governments that have implemented sustainable procurement policies and practices that minimize the environmental and health impacts of electronics.

INTRODUCTION: WHY BUY GREEN ELECTRONICS?

Local governments spend millions of dollars on electronics each year. Not only is electronics a big ticket product category, but it also has many environmental impacts that span the entire product lifecycle from manufacture to use to end of life.

This chapter discusses the following electronics and ancillary products:

- Computers (desktops, laptops, tablets)
- Displays (monitors)
- Imaging equipment (printers, copiers, multi-function devices, scanners, fax machines, etc.), Servers
- Toner and ink cartridges

This chapter describes best practices cities can undertake to procure, operate, and manage electronic equipment in order to:

- Reduce energy and paper consumption;
- Prevent indoor air pollution and toxic chemical exposures;
- Save money and reduce manufacturing impacts through printer/copier consolidation and electronic equipment upgrades and reuse;
- Reduce environmental and economic impacts by choosing high-yield and remanufactured toner/ink cartridges, rechargeable batteries, and other ancillary products;
- Ensure electronic equipment is safely managed at the end of its useful life; and
- Minimize difficult-to-recycle packaging waste

SUSTAINABILITY HOT SPOTS FOR ELECTRONICS

Identifying the "hot spots" associated with the lifecycle of electronics is an important first step because it can help identify products that can reduce environmental, economic, and health impacts. The sustainability "hot spots" associated with electronics include:

- **Manufacturing impacts** such as energy consumption, water consumption, mining, and toxic chemical exposure and releases.

- **Energy consumption during use**. According to the U. S. Energy Information Administration, computers and office electronics are responsible for about 15% of a typical office building's energy use.[124] According to the U.S. Department of Energy, "ENERGY STAR-labeled computers use 30%-65% less energy than computers without this designation, depending on usage… and laptops use much less energy than desktop computers."[125] The US federal government's ENERGY STAR Program estimates that If all computers sold in the United States were ENERGY STAR certified, the savings would be:
    - *More than $1 billion in annual energy costs per year*
    - *Approximately 15 billion pounds of annual greenhouse gas emissions, equivalent to the emissions from more than 1.4 million vehicles*[126].

- **Toxic chemical emissions during use**. Office equipment can contribute toxic air pollutants to the indoor environment. Notably, laser printers and copiers can be a source of ozone, toner particles, paper dust, volatile organic compounds (VOCs), and semi-volatile organic compounds (SVOCs) that are linked to eye, nose, or throat irritation; headaches; and fatigue. This is particularly a problem when imaging equipment is concentrated in poorly ventilated areas. Some of the chemicals emitted from electronic equipment (such as benzene, formaldehyde, dibutyl phthalate, and styrene) can cause cancer, reproductive harm, and/or asthma.[127]

- **Toxic chemical emissions during use**. A typical office generates 1.5 pounds of paper waste per person each day. Using imaging equipment with auto-duplexing enabled can cut paper consumption by 40%.

- **Electronic waste.** Over 40 million tons of electronic waste (e-waste) is generated every year globally, and the amount is expected to increase – reaching approximately 50 million tons by 2018.[128] Approximately 40% of the electronics generated in the U.S. are recycled domestically. One study by the National Institute for Occupational Safety and Health (NIOSH) found workers at a U.S. recycling facility were overexposed to lead and cadmium, which was detected in air, surface, and clothing samples. As a result, some workers had elevated levels of lead in their blood.[129]

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[124] US Energy Information Administration, *Annual Energy Review*, September 2012; **http://www.eia.gov/totalenergy/data/annual/showtext.cfm?t=ptb0211**

[125] US Department of Energy, *Energy Efficient Computers, Home Office Equipment and Electronics*, **http://energy.gov/energysaver/energy-efficient-computers-home-office-equipment-and-electronics**

[126] US ENERGY STAR Program, Computers (Undated webpage); **https://www.energystar.gov/products/office_equipment/computers**

[127] Lawrence Berkeley National Laboratory and California Air Resources Board, *Indoor Pollutants Emitted by Office Equipment: A Review of Reported Data and Information Needs*, January 2007 **http://www.osti.gov/scitech/servlets/purl/924853/**

[128] United Nations University, Institute for the Advanced Study of Sustainability, *The Global E-Waste Monitor 2014: Quantities, Flows and Resources*, **http://i.unu.edu/media/ias.unu.edu-en/news/7916/Global-E-waste-Monitor-2014-small.pdf**

[129] National Institute for Occupational Safety and Health (NIOSH), Centers for Disease Control, Health Hazard Evaluation Program, *Evaluation of Occupational Exposures at an Electronic Scrap Recycling Facility,* July 2014, **http://www.cdc.gov/niosh/hhe/reports/pdfs/2012-0100-3217.pdf**

Most e-waste is recycled overseas, where serious pollution problems have been documented. According to the World Health Organization, "e-waste-connected health risks may result from direct contact with harmful materials such as lead, cadmium, chromium, brominated flame retardants or polychlorinated biphenyls (PCBs), from inhalation of toxic fumes, as well as from accumulation of chemicals in soil, water and food."[130]

- **Electronic waste.** Some electronic equipment – although a shrinking percentage – is shipped in difficult-to-recycle, bulky packaging material, notably polystyrene and polyurethane foam. This adds to a jurisdiction's waste handling and disposal costs as well as its environmental impacts.

- **Waste from imaging supplies, batteries, etc**. Hundreds of millions of toner and ink cartridges are thrown away in the U.S. each year. While some are recycled, most end up in landfills or trash incinerators. Virgin (OEM) toner and ink cartridges cost 30-60% more per copy than equivalent remanufactured models, which are widely available.

[130] World Health Organization, Children's Environmental Health Program, *Electronic Waste*; **http://www.who.int/ceh/risks/ewaste/en/**

What is EPEAT?

The Electronic Product Environmental Assessment Tool (EPEAT) makes it easy for purchasers to evaluate, compare, and select desktops, notebooks, monitors, and imaging equipment based on their environmental attributes. EPEAT's environmental criteria cover the complete product lifecycle from design through use to recycling. The rating system was developed by a multi-stakeholder group that included manufacturers, environmentalists, purchasers, government, recyclers, and researchers.

EPEAT certification includes three increasingly stringent tiers of environmental performance: Bronze, Silver, and Gold. The ENERGY STAR standard for energy efficient computers, administered by the U.S. Environmental Protection Agency (EPA) and Department of Energy (DOE), is a required criterion in the EPEAT computer standard.

EPEAT covers three product categories:

- Computers and Displays
- Imaging Equipment
- Televisions

Standards for servers and cellular phones are currently in development.

Most EPEAT criteria apply to the characteristics of individual products and include a variety of service-related criteria including takeback and responsible recycling of products, packaging and batteries, as well as the provision of extended warranties and other support services that can significantly extend product life and reduce environmental impact.

Products are measured against both required and optional criteria. To be included in EPEAT at the Bronze level, a product must, at a minimum, meet all of the required criteria in its category. EPEAT Silver-rated products must meet all required criteria and at least 50% of the optional criteria. EPEAT Gold-rated products must meet all required criteria and at least 75% of the optional criteria.

EPEAT, which is managed by the Green Electronics Council, has a wealth of information for purchasers available on its website, including plug-and-play contract language, best practice guides, and too for calculating benefits attributable to EPEAT purchasing.

BEST PRACTICES

Best Practice #1

Form a green electronics procurement team.

A green electronics procurement team can create a sustainable electronics policy and implementation plan that includes procurement, operational, and end-of-life waste management strategies for your electronics. Generally, the team is comprised of representatives from the following departments:

- Purchasing Department
- IT Department
- Departments that are high-volume electronics end users
- Office of Sustainability
- Recycling Office

Green electronics procurement teams are typically granted the ability to make decisions and carry out the following strategies to achieve their goals:

- Address cost-savings in addition to environmental benefits
- Identify upcoming contracting opportunities for electronics and ancillary products
- Develop methods for ongoing monitoring and reporting
- Assist in bid evaluation to ensure compliance with sustainability requirements

San Francisco, California, for example, created a formal Committee on Information Technology (COIT) in its 2008 *COIT Green Information Technology Procurement Policy.* The policy outlined the City's green electronics procurement goals and clarified that IT equipment would be managed by the COIT.

Best Practice #2

Create a green electronics policy.

In the wake of significant media attention on the global problems associated with the manufacture and disposal of electronic equipment, many local governments have adopted green electronics policies. Some jurisdictions create stand-alone green electronics policies that set high-level sustainability goals while others incorporate green electronics procurement language into sustainable procurement policies or broader sustainability policies.

An effective green electronics policy typically mandates several procurement actions that will help the municipality meet its sustainability goals, including:

- Clarifying the roles and responsibilities of the green electronics procurement team and other staff;

- Setting high-level goals for reducing the environmental, health, and social impacts of electronics including energy, greenhouse gas emissions, and waste reduction targets;

- Identifying credible sustainability standards for (some or all) electronic equipment – often referencing EPEAT or ENERGY STAR – or establishing a process by which sustainability standards will be developed;

- Committing to handling electronic waste using strict standards (such as requiring recyclers to be certified by a third-party certification organization such as E-Stewards or R2); and

- Instituting reporting requirements to assess the extent to which the policy is being implemented and the resulting environmental and financial benefits.

Some green electronics policies go further and prescribe specific actions the jurisdiction will take to improve the sustainability of its electronic equipment, such as:

- Promoting the use of multi-function devices (MFDs) that can replace printers, copiers, scanners, and fax machines with one piece of equipment;
- Setting paper reduction goals and prescribing actions to meet those goals such as requiring copiers and printers to be equipped and set up to print double-sided;
- Requiring vendors to take back electronic equipment (or at least offer recycling services);
- Discouraging vendors from offering electronic equipment in difficult-to-recycle packaging;
- Mitigating the environmental impacts of servers through the procurement of highly energy-efficient data storage systems and virtual (cloud-based) data storage services; and
- Promoting the use of remanufactured and/or high-yield toner cartridges.

Case Study: Madison, Wisconsin's Electronics Procurement Policy

Madison, Wisconsin's *Policy for the Procurement and Disposal of Electronic Products*, issued in 2009, formally established the City's e-Procurement and e-Waste Management Program. It also outlined purchasing procedures and sustainability standards for electronic equipment as well as electronic waste recycling and disposal services:

> *All purchases and leases of electronic equipment must be approved by Information Technology and Purchasing to ensure that only approved, standardized equipment is procured. The City will maintain a sustainable system of e-procurement that is concerned with the acquisition of electronic products that meet the most preferable environmental, social and economic standards in accordance with the EPEAT and Energy Star environmental criteria.*
>
> *The City will utilize only approved recycling companies that operated under the highest environmental standards to ensure comprehensive security destruction procedures and maximum e-waste recycling, recovery and resale processes. These companies shall comply with the most rigorous criteria consistent with current international e-waste laws, standards and definitions for sustainable and socially just electronics recycling operations as outlined by Information Technology & Purchasing.*[131]

Case Study: San Francisco, California Commits to Buying EPEAT Gold Electronics

After learning that approximately 20-25% of their commercial building energy use is attributable to computers and other information communication technology, San Francisco adopted several polices

[131] City of Madison, Wisconsin, *Policy for the Procurement and Disposal of Electronic Products,* April 2009; .**https://www.cityofmadison.com/mayor/apm/4-7.pdf**

committed to purchasing green electronics.[132] San Francisco's *COIT Green Information Technology Procurement Policy,* passed in 2008, states that government agencies will purchase, to the greatest extent feasible, information technology that:

- "Contain minimum levels of toxic components,
- Operate with the highest energy efficiency,
- Maximize product longevity,
- Is designed to facilitate recycling at the end of product life, and with maximum use of recycled and recyclable materials,
- Require minimal packaging with maximum recycled and recyclable content,
- Promote extended producer responsibility for manufacture and disposal, and
- Have the smallest possible climate change footprint."

In 2009, San Francisco issued *COIT/SF Approved Environmentally Preferable Purchasing Requirements for Personal Computers and Servers*, contained a more stringent procurement requirement that "all personal computers, notebook computers and monitors purchased by City departments shall meet the EPEAT Gold standard." It also required its servers to meet ENERGY STAR standards.

Then, recognizing the energy efficiency, reliability, and security benefits of using virtual servers, in 2010, COIT issued a *Virtual First Server Procurement Policy* "meant to encourage departments that have not adopted a virtualization strategy to do so and to encourage departments that that have begun to virtualize servers to continue to expand this effort." This policy states, "when issuing requests for information, proposals, quotes or any other solicitation for technology solutions that include a server or storage, departments and the Office of Contract Administration shall require potential vendors to state whether their applications and systems are certified and/or supported in a virtualized environment."

Several USDN cities and counties have incorporated green electronics policy language into their existing environmentally preferable purchasing (EPP), sustainable procurement, or sustainability policies. Typically, green electronics language in existing policies directs the jurisdiction to purchase EPEAT-registered electronic equipment and responsibly manage its electronic waste. For example:

- **San Jose, California's** 2012 *Environmentally Preferable Purchasing Policy (EP3)* directs City employees to "procure environmentally preferable goods and services that meet environmental product standards established by governmental or other widely recognized authorities. Examples include…EPEAT for IT equipment."

- **Phoenix, Arizona's** *Environmentally Preferable Purchasing (EPP) Policy* directs City employees to buy "products… registered as bronze or better under the Electronic Products Environmental Assessment Tool (EPEAT) meet rigorous environmental standards for reduced

[132] San Francisco Department of the Environment Press Release: "Mayor Aims to Green City's Information Technology," February 2008; **http://sfenvironment.org/news/press-release/mayor-aims-to-green-citys-information-technology**.

toxicity and should be selected, whenever available."[133] It also directs City employees to use environmentally responsible recycling services for electronic equipment, stating:

> *Vendors and services with take-back programs (e.g. carpet or computer take-back programs) used by the city shall adequately demonstrate responsible recycling programs. Responsible recycling programs for electronics can be demonstrated by certification or compliance with a voluntary electronics recycling standard such as e-Stewards Standard for Responsible Recycling and Reuse of Electronic Equipment, EPA's Plug-in to e-Cycling: Guidelines for Materials Management, or an ISO 14001 environmental management system.*[134]

Several cities have also adopted policies that discourage the purchase of products that contain conflict minerals. For example, in 2011, **Pittsburgh, Pennsylvania,** became the first U.S. city to call on "electronic companies and other industries to take the necessary steps to remove conflict minerals from their supply chain" and "when available, favor verifiably conflict-free products."[135]

State Electronics Challenge Partnership Agreements

Another way local governments can commit to purchasing green electronics and managing their electronic waste responsibly is by signing a partnership agreement with the State Electronics Challenge (SEC) Program, which is open to local governments as well as states.[1] Several USDN members (e.g., Denver and Fort Collins, Colorado; Providence, Rhode Island; and Tacoma, Washington) have utilized SEC Program resources and won awards for their exemplary efforts.

The SEC encourages local governments and other public entities to responsibly manage office equipment by:

- Purchasing greener office equipment;
- Reducing the impacts of these products during use; and
- Managing obsolete electronics in an environmentally safe way.

The SEC provides model policy language and other resources to help its partners become leaders in addressing the challenges posed by electronics.

Best Practice #3

Develop a green electronics procurement implementation plan.

A green electronics procurement implementation plan identifies important steps your jurisdiction intends

[133] City of Phoenix, *Environmentally Preferable Purchasing Policy*, January 26, 2012; **https://www.phoenix.gov/oepsite/Documents/070520.pdf**.
[134] Ibid.
[135] City of Pittsburgh, *Proclamation 2011-1639*, April 19, 2011; **https://pittsburgh.legistar.com/LegislationDetail.aspx?ID=873982&GUID=53DB676C-7643-4948-A56D-6731D4925634**

to take to make meaningful progress toward meeting its policy goals. Developing a green electronics implementation plan typically involves the following steps:

- **Evaluating your jurisdiction's electronic equipment "fleet,"** including types and quantities of machines used, their energy consumption, and other sustainability attributes. This information can be gathered from vendor reporting requirements and/or departmental surveys. This will serve as your baseline evaluation to help guide your implementation plan.

- **Reviewing existing electronic equipment contracts** to determine how these products have been purchased (or leased) and when price agreements are expiring (and therefore will need to be re-bid). Encourage IT vendors to provide historic spend data and assess whether products offered are in compliance with your green electronics policy.

- **Evaluating your jurisdiction's electronic product reuse and waste management procedures** to ensure that they are protecting human health and the environment as well as minimizing liability risks through proper data destruction.

- **Conducting total cost of ownership (TCO) analysis** once bids are submitted to determine which electronics models are likely to cost your jurisdiction the least over the expected life of the product. Important costs to consider include electricity costs (based on expected usage), replacement cost (based on each product's "life expectancy"), and end-of-life costs (which may be included with the vendor's bid). When comparing imaging equipment, it is also important to estimate the cost of toner or ink (which will vary by model) and paper (which will be reduced if the equipment can email documents and automatically print double-sided).

  The U.S. EPA's Federal Electronics Challenge has developed a basic TCO Calculator Tool, which enables users to compare the costs of different options for IT asset management with an emphasis on decisions that may have an environmental impact.[136]

- **Identifying opportunities to consolidate printers** into a networked solution. According to the ENERGY STAR program, offices can lower their printing costs substantially by eliminating inkjet and other high-cost printers, sharing workgroup printers, and using multi-function devices (MFDs) instead of individual printers, copiers, fax machines, and scanners. According to ENERGY STAR, "most organizations can achieve a ratio of one device (typically a networked multifunction device) per 10 or more users. Benefits include lower costs for hardware, consumables (paper, ink and toner), electricity, and maintenance." Representative savings run between 30 and 40 percent and can range as high as 60 percent."[137]

Your plan may also describe specific initiatives designed to phase-out single-function devices, move toward server virtualization, or reduce paper consumption.

Case Study: Alameda County, California's Desktop Printer Reduction Project

[136] http://www2.epa.gov/sites/production/files/fec/resources/tco_tool.xlsx
[137] US Environmental Protection Agency, ENERGY STAR Program, *More IT Energy Saving Tips: Consolidate Printers*, https://www.energystar.gov/products/low_carbon_it_campaign/more_it_energy_saving_tips

In December 2013, Alameda County solicited bids for leasing multi-function devices (MFDs) aimed at addressing environmental issues that result from the production and operation of these devices. The County researched the costs and benefits of MFDs and determined that it could save money and better meet its sustainability goals by transitioning away from the procurement of single-function electronics toward the use of MFDS. The County reduced its desktop printers by 70%, which saved them $7,000 annually from energy savings from eliminating redundant equipment, lower ink/toner costs, and avoided maintenance costs. [138]

This bid solicitation "included requirements for energy efficiency, indoor air quality and avoidance of hazardous materials, as well as an option to require EPEAT certified equipment to promote environmental leadership standards in imaging equipment" and required approved vendors to participate in "equipment set-up, reporting and staff training to reinforce the County's commitment to duplex printing and energy conservation."

Best Practice #4

Assess current green electronics purchasing practices.

A crucial early step in creating your sustainable electronics plan is identifying which contracts are currently in place for electronics. Electronics may be purchased through purchase orders or price agreements with specific manufacturers, on contracts for IT or communications equipment, or on broader contracts for office supplies. Cities may also have service agreements for computer leasing or electronic waste recycling.

Incorporating specifications into a new or existing contract can take time. You should allow at least 4-6 months prior to a contract's expiration to review and develop new contract terms.
Steps for assessing your green electronics purchasing practices include:

- Reviewing existing contracts to identify upcoming sustainable procurement opportunities;
- Identifying renewal/bid dates and how contracts are developed (e.g., RFP, ITB, etc.); and
- Conducting a spend analysis to determine volumes of both conventional and green electronics purchased.

Best Practice #5

Adopt green electronics specifications and procedures.

Jurisdictions might create new bid solicitations that require compliance with sustainability specifications or standards (notably EPEAT or ENERGY STAR), or they might award points in the RFP process to vendors that offer more certified products, or products certified at a higher level (e.g., EPEAT Gold). Jurisdictions might also add EPEAT-registered or ENERGY STAR-certified products to their market basket or core bid list.

[138] Alameda County, California. **https://www.acgov.org/sustain/what/wastereduction/print.htm**

If electronics are purchased using multiple contracts or various (decentralized) procurement methods, develop bid solicitation templates that reference your specifications that purchasing agents can use when they are developing individual purchasing orders.

When developing bid solicitations for computers, monitors, and notebooks/tablets, create bidder survey questions, product pricing sheets, bid evaluation criteria, vendor reporting templates, and other bid solicitation documents that:

- Require ENERGY STAR-rated and EPEAT-registered products, with preference for products registered at higher tiers.
- Require that the ENERGY STAR power management features are enabled;
- State whether there are any optional EPEAT criteria that are required or will be awarded points in your bid evaluation process (such as additional energy or toxics reduction requirements);
- Require or give preference to models that are not packaged in polystyrene or other difficult-to-recycle packaging; and
- Require or give preference to vendors that offer electronic equipment takeback services.[139]

It should be noted that since the EPEAT standard for computers, monitors, and laptops is relatively mature, approximately two-thirds of the more than 1600 products are registered at the gold level. Over half of the 1145 EPEAT models registered for sale in Canada are also EPEAT Gold. Therefore, jurisdictions can feel comfortable setting their specification at the EPEAT gold level. Furthermore, the EPEAT registry lists all of the required and optional criteria each product meets, making it easy to require or give preference to specific criteria.

If your jurisdiction has long-term contracts that were recently re-bid, there may be opportunities to block products that are not on the EPEAT Registry or ENERGY STAR list, especially when products on those lists are also offered. Another strategy to green an existing contract is to require vendors to clearly label all EPEAT-registered and ENERGY STAR-certified equipment that is offered – although prohibiting vendors from selling non-listed products has proven to be more effective.

In order to prevent the purchase of non-compliant computer equipment, some cities such as **Palo Alto, California**, prevent City staff from purchasing it using petty cash.

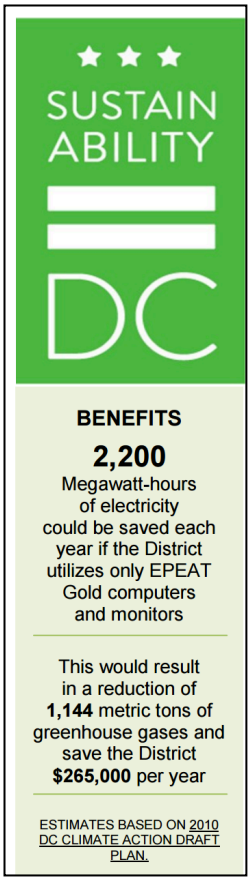
Case Study: Washington, D.C., Requires Its New Computers and Monitors to Meet the EPEAT Gold Standard

After determining that 2,200 megawatt-hours of electricity could be saved each year if it utilized only EPEAT Gold computers and monitors, the District of Columbia adopted a specification requiring all computer equipment to be registered EPEAT Gold. The District's *Environmental Specification*

Guidance for Computers and Monitors also requires vendors to fill out a reporting template verifying that all models sold on the contract comply with this specification.[140]

When developing bid specifications for imaging equipment (e.g., multi-function devices, copiers, printers, and scanners):

- Require products to be EPEAT Silver registered or higher;
- Require products to be shipped with energy management systems (sleep/standby) modes enabled;
- Require duplex printing capability and that equipment be shipped with the double-sided printing function enabled;
- Consider requiring additional optional EPEAT criteria (e.g., requiring all lights to be mercury-free (LEDs);
- Consider requiring the equipment to use toner or ink cartridges with a minimum page count to reduce operational costs; and
- Consider blocking desktop printers from contracts.
- Require vendors to clearly label all products with environmental attribute in the contract ordering portal as well as in promotional materials so that buyers can easily identify them. If both green and non-green products are offered on your contracts, require vendors to clearly label EPEAT-registered and ENERGY STAR-certified products.



Washington, DC's specifications for imaging equipment (i.e., printers, copiers, and multi-function devices includes following requirements:

- Must default to duplex printing AND
- Must have no restrictions on remanufactured toner cartridges AND either
- EPEAT Registered OR
- ENERGY STAR + RoHS-compliant + Provision for take-back service MUST be offered

[140] District of Columbia Office Contracting and Procurement, *Environmental Specification Guidance for Computers and Monitors*, October 2014, **http://ocp.dc.gov/sites/default/files/dc/sites/ocp/page_content/attachments/Co_guidance.pdf**

Best Practice #6

Address end-of-life management in your contracts.

After strategically purchasing the "best" devices and optimizing their utilization in order to refurbish and reuse in-house, you reach the point where devices are no longer useable in your jurisdiction. Next steps, outlined by the Sustainability Roadmap for Hospitals and the Green Electronics Council in their publication *Lifecycle Management of Electronics from Procurement to Disposal*, include:

- ***Erase data and sanitize equipment.*** *Track devices in asset management system. (If using an outside vendor, they may provide this service as part of your contract.)*

- ***Donate usable equipment to a reputable reuse organization****.*

- ***Utilize end of life services from your vendors*** *if you negotiated these as part of your purchase contract.*

- ***Establish a service contract with a third party asset disposition vendor*** *(or your manufacturer vendor's take-back division) that supports the full spectrum of end of life activities – redeployment, refurbishment and reuse, sale and donation, harvesting of saleable parts, and recycling.*
    - *e-Stewards Standard for Responsible Recycling and Reuse of Electronic Equipment®(e-Stewards), and Sustainable Electronics Recycling International (SERI)/R2 set standards and provide certificates to electronics recyclers globally.*
    - *EPEAT requires that all registered products have manufacturer takeback and recycling that meet specific best practices, and approves standards that qualify, including R2 and eStewards.*
    - *Sustainable Electronics Recycling International sets standards and provides certificates to electronics recyclers for the R2 standard.*

- ***Require asset tracking and reporting*** *by all asset disposition and recycling service vendors to ensure management through certified recyclers and confirmation of appropriate final disposition of all discarded electronics.*

- ***Understand the issues around electronics recycling****. Improper disposal is a serious health and environmental concern. Released in 2015, the National Institute of Environmental Health Sciences' comprehensive report E-Waste and Harm to Vulnerable Populations: A Growing Global Problem is a great resource.*

- ***Consider disposal attributes that are important to track*** *during the contracting and ongoing management program. Attributes will help identify the success or concerns about the program, so that corrections can be implemented.*

- ***Educate staff about all electronics recycling***.[141]

Identifying Certified Recyclers

There are currently two accredited certification standards for electronics recyclers in the U.S.: e-Stewards Standard for Responsible Recycling and Reuse of Electronic Equipment (e-Stewards) and Responsible Recycling (R2) Practices (R2).

Both e-Stewards and R2 provide the following benefits:

- Advance best management practices
- Offer a way to assess the environmental, worker health, and security practices of entities managing used electronics
- Based on strong environmental standards that maximize reuse and recycling, minimize exposure to human health or the environment, ensure safe management of materials by downstream handlers, and require destruction of all data on used electronics

Certified electronics recyclers have demonstrated through audits and other means that they continually meet specific high environmental standards and safely manage used electronics. Once certified, continual oversight by the independent accredited certifying body holds the recycler to the particular standard.

Best Practice #7

Establish a paper reduction policy and procurement practices.

Each employee in a typical office uses 10,000 sheets of paper every year– and generates about 1.5 pounds of waste paper each day.[142] Consumption of paper from unnecessary print jobs – or the creation of single-sided copies – has avoidable environmental and economic impacts. The manufacture of paper – particularly from virgin materials (usually trees) – uses significant amounts of energy, water, and chemicals and contributes to local pollution and global deforestation problems.

Buying electronic equipment and print management software that make it easier to complete tasks using less paper is an important component of a sustainable electronics purchasing program. Below are some recommended procurement strategies you can use to reduce paper consumption:

- Include a paper reduction goal in your green electronics policy and plan.

  Seattle, Washington , for example, created a *Paper Cuts program* that has reduced its copy paper consumption by 40%, which enabled the City to cost-effectively purchase 100% recycled

[141] Sustainability Roadmap for Hospitals and the Green Electronics Council. *Lifecycle Management of Electronics from Procurement to Disposal.* **http://www.epeat.net/documents/purchaser-resources/PIM_Healthcare_Electronics.pdf**
[142] Federal Electronics Challenge, The Benefits of Auto Duplexing, September 12, 2013; **https://www.epa.gov/sites/production/files/2013-09/documents/fec_automatic_duplexing.pdf**

copy paper.

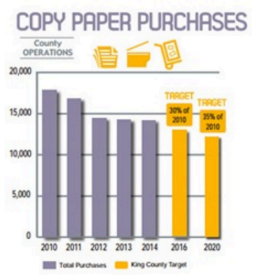
- Choose imaging equipment (particularly MFDs) that can easily scan documents to email or document storage.

- Require all printers, copiers, MFDs to have built-in capacity to do double-sided printing and set the equipment to default to duplexing.

- Choose vendors that can demonstrate that their imaging equipment works reliably with double-sided printing and copying (as well as with recycled-content paper).

Case Study: King, County Washington's Paper Reduction Initiative
King County set a 20% reduction paper goal (2013 v. 2010) and achieved a 22% reduction in paper use, saving $210,000 annually and reducing GHG emissions by 225 MT-CO2e. Some of the strategies they used include establishing a duplex printing standard, implementing paperless office practices, and only buying copy paper that has 30-100% postconsumer recycled content.[143]

Copy Paper Reduction



Measure: Total cases of copy paper purchased.

Target: Compared to 2010 levels, reduce copy paper usage by 20 percent by 2013, 30 percent by 2016, and by at least 35 percent by 2020.

Current Status: The County is 22 percent below 2010 levels in copy paper usage.

GHG Emissions Reduction: 225 MTCO2e reduction for 2014 compared to the 2010 baseline

Best Practice #8

Purchase ancillary IT products that offer environmental, health, and economic benefits.

Ancillary IT products include toner and ink cartridges, power supplies, thumb drives and other storage devices, batteries, and other products that are needed to operate electronics. It is important to include these types of products in your sustainable electronics purchasing program in order to maximize environmental and financial benefits.

One of the highest-spend items on a local government's office supplies contract is toner cartridges. Although free manufacturer-financed recycling programs are readily available, millions wind up in landfills and trash incinerators every year – contributing to air, water, and land pollution. Toner cartridges are largely made of plastic, which is derived from petroleum, a non-renewable resource. Cities and counties can reduce their toner and ink cartridge waste – and save money – by:

- Choosing imaging equipment that uses toner or ink cartridges with a relatively high capacity so that fewer cartridges are needed over time. This can be included in a total cost of ownership (TCO) analysis.

- Buy toner and ink cartridges labeled "high-yield," which typically contain 2-3 times more toner or ink than equivalent standard yield cartridges. High-yield toner and ink cartridges, which often are labeled with a HY, X, XL, or LL in their ordering code cost less (on a per-page basis), but are often overlooked because they have a higher initial cost. They also prevent transportation,

[143] King County, Washington. http://your.kingcounty.gov/solidwaste/wasteprevention/office-paper-reduction.asp

packaging, and waste impacts.

- Purchase remanufactured toner cartridges (using strict performance standards).
- Look for ink and toner cartridges with high levels of recycled content (at least 50% total recycled content or 30% post-consumer recycled content) in order to "close the loop."
- Consider toner and ink cartridges that are on the USDA's list of BioPreferred products; they contain at least 20% plant-based toner or ink, which reduces petroleum consumption and may have lower chemical emissions during use.[144]
- Require (or give preference to) vendors that offer free takeback programs for spent toner and ink cartridges – particularly if they offer rebates or credits returned cartridges.

Case Study: King County, Washington, Saves Over $100,000/Year by Using Remanufactured Toner Cartridges

For over 25 years, **King County, Washington**, has been a national leader in the procurement of remanufactured toner cartridges, which it purchases from local remanufacturing companies as a way to support the local green economy. The County attributes program's success to pilot tests and imposing stringent performance requirements on these products (i.e., equivalent to OEM cartridges). Below is an excerpt from a fact sheet King County's Environmental Purchasing Program created to showcase the results and lessons learned from this long-term successful sustainable procurement initiative:

> *King County has purchased remanufactured toner cartridges for laser printers, fax machines and ink-jets since 1991. Cartridges supplied under contract must meet original equipment manufacturers (OEM) standards and provide full performance guarantees. The County's specifications require spent cartridges to be remanufactured and all components to be recycled when their useful life is over, reducing the landfill disposal of hazardous material. In 2015, the County purchased 1,458 remanufactured cartridges. These purchases saved an estimated $104,000. The cost of recycled cartridges varies, but is usually 30 to 50 percent less than the cost of new cartridges.*[145]

[144] USDA BioPreferred Product Catalog; https://www.biopreferred.gov/BioPreferred/faces/catalog/Catalog.xhtml
[145] King County, *Green Purchasing Guides: Recycled Toner Cartridges*, June 2016; http://www.kingcounty.gov/~/media/depts/finance/procurement/Documents/Environmental/EP_Products_Toner.ashx?la=en

Best Practice #9
Track and report results.

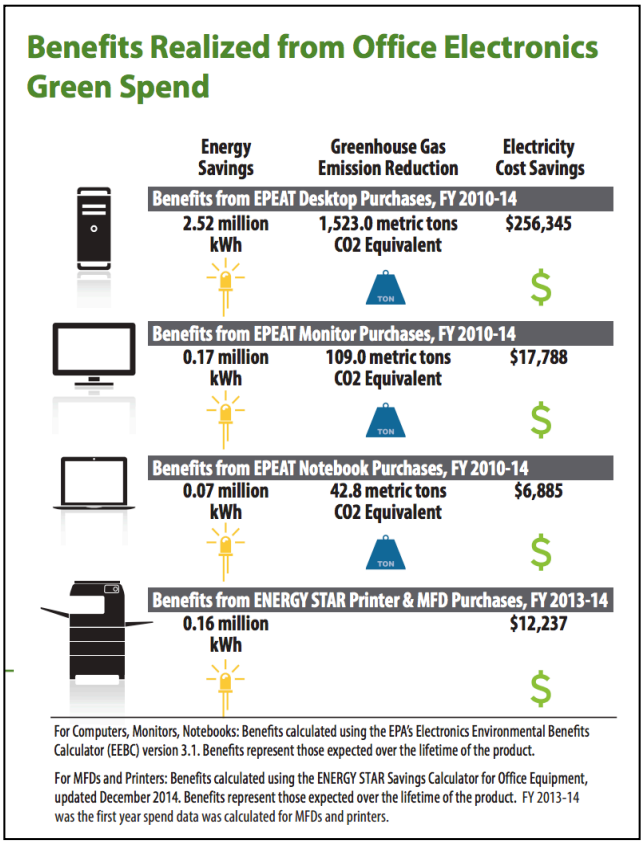
Green electronics are one of the easiest categories of products to track, particularly when the purchasing decisions were approved by a single entity (such as the jurisdiction's IT, finance or procurement department) or the products were purchased on a centralized contract.

As a first step, some jurisdictions work off of the baseline analyses they have conducted during the development of their implementation plan to understand the benefits of altering the types of devices and equipment they are purchasing.

Municipalities that track their purchases of green electronics typically start by calculating the dollar amount and percentage of electronics that meet their environmental specifications. This often means the product is on the EPEAT registry and/or the ENERGY STAR list.

For example, in its February 2015 *Green Spend Snapshot*, **Portland, Oregon,** detailed the amount and the percentage it spent on desktops, monitors, notebooks, tablets, multi-function devices, and printers in FY 2013-14. (See table to right for details.)[146]

Portland used calculators developed by the EPEAT and ENERGY STAR programs to estimate the amount of electricity it reduced, as well as the dollars it saved and greenhouse gas emissions it reduced by purchasing energy-efficient computer and imaging equipment. (See table right.)[147]



As with other sustainable purchasing initiatives, the benefits of purchasing sustainable electronics are most clearly communicated if they are tangibly measured and reported. In the case of electronic products, a good place to start is information provided by manufacturers on energy and resource efficiency in production and use of their products; however, the most impactful measurement is that which is conducted by the jurisdiction itself.

In the case when use of the devices is managed or monitored centrally (e.g., managed print services) there are opportunities for the IT department to easily measure progress in reducing paper and ink or toner usage.

[146] City or Portland Procurement Services, *Green Spend Snapshot*, February 2015, http://www.portlandoregon.gov/brfs/article/522477
[147] Ibid. City or Portland Procurement Services, *Green Spend Snapshot*, February 2015, http://www.portlandoregon.gov/brfs/article/522477

In other cases, the number (or weight) of products such as batteries or toner cartridges that were purchased can be tracked. Municipalities can also measure reduced environmental impacts through responsible recycling.

Finally, the jurisdiction might perform an energy analysis before and after procuring new electronic equipment and/or implementing new protocols on the use of energy management systems.

Case Study: San Francisco, California Wins EPEAT Purchasing Award For Excellence in Procurement of Sustainable Electronics

Over their lifetime, compared to products that do not meet EPEAT criteria, the 6,285 EPEAT-registered electronics purchased by the City and County of San Francisco in 2015 will result in:

- Reduction in use of primary materials by 1,072 metric tons, equivalent to the weight of 30 tractor-trailer 18-wheelrs;
- Avoidance of the disposal of 6,78kg hazardous waste, equivalent to the weight of 55 refrigerators;
- Elimination of the equivalent of 22 U.S households' annual solid waste – 41.7 metric tons

EPEAT's requirement that registered products meet the latest ENERGY STAR specifications means these products will consume less energy throughout their useful life, resulting in:

- Savings of over 3 million kWh of electricity – enough to power 239 U.S. homes for a year
- Avoidance of 4,839 kilograms of water pollutant emissions
- Reduction of more than 510 metric tons of greenhouse gas emissions – equivalent to taking 239 average U.S passenger cars off the road for a year - $313,320 in energy cost savings.

King County, Washington tracks its green purchases of key commodities, including computers. By tracking the number of EPEAT and ENERGY STAR computers, King County was able to measure the cost savings within that product category, which in 2011 amounted to $91,875. This tracking and reporting effort strengthens the case for the future purchases of third-party certified products in this product category.

ADDITIONAL RESOURCES

- Buyers Laboratory, Inc. (BLI) lists environmental features and equipment options of imaging equipment: **http://www.buyerslab.com**
- ENERGY STAR Product Finder allows users to search for certified products and compare their features: **https://www.energystar.gov/productfinder/product/certified-computers/results**
- Environmental Paper Network Paper Calculator allows users to compare different types of paper for environmental benefits and paper savings: **http://c.environmentalpaper.org/home**
- EPEAT Registry: **http://ww2.epeat.net/searchoptions.aspx**

- The Federal Electronics Challenge helps federal agencies and facilities in the US meet their federal electronics stewardship requirements: **https://www.epa.gov/fec**
- *Responsible Purchasing Network Purchasing Guide for Imaging Equipment:* **http://www.responsiblepurchasing.org/purchasing_guides/imaging_equipment/naspo_rpn_imaging_equipment_purchasing_guide.pdf**
- Sustainable Purchasing Leadership Council Guidance 2.0 (requires member login): **https://www.sustainablepurchasing.org/guidance/**

Chapter 9: Sustainable Procurement in Action: Vehicles and Fleet Maintenance Products

This chapter focuses on sustainable procurement policies and practices for vehicles and fleet maintenance products. It describes several best practices cities and counties can undertake to procure sustainable vehicles in order to reduce fuel consumption and prevent tailpipe emissions, while saving money.

INTRODUCTION: WHY SWITCH TO A GREENER FLEET?

Local governments own a variety of fleet vehicles, and are typically responsible for fueling and maintaining them. Growing concerns about climate change are causing many cities and counties to "green" their fleet in order to show leadership on climate protection since vehicles are one of the largest contributors of greenhouse gas emissions in urban areas. Collectively, cars and trucks make up one fifth of all GHG U.S. emissions.[148] Some municipalities have attempted to quantify the environmental, health and economic impacts associated with their fleet vehicles. **Alameda County, California**, for example, reported in its 2010 *Climate Action Plan* that its fleet vehicles accounted for 12% of the total greenhouse gas emissions associated with its county operations and services.[149]

In addition, fossil fuel-powered vehicles cause other serious public health risks. According to the City of New York, "In addition to GHGs, on-road vehicles emit particulates and other air pollutants such as nitrogen and sulfur oxides (NOx and SOx). These air pollutants are detrimental to public health (increasing premature mortality and the number and severity of asthma and cardiovascular disease), as well as the economy (as poor health causes New Yorkers to miss work and school)."[150]

Increasingly, municipal governments are choosing to downsize their fleet, replace older vehicles with fuel-efficient and low-emitting vehicles, utilize car-sharing and mass transit services, and installing vehicle tracking systems. They are doing so in order to meet their sustainability goals of reducing non-renewable fuel consumption and preventing air pollution (including emissions of greenhouse gases, diesel particulates and other contaminants), while saving money. Some are going even further to protect human health and the environment by implementing a comprehensive green fleet program, which may also involve purchasing low-rolling resistance tires, re-refined motor oil, and certified low-toxicity vehicle cleaning products and other environmentally preferable fleet maintenance products.

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[148] Union of Concerned Scientists: *Car Emissions and Global Warming*, **http://www.ucsusa.org/clean-vehicles/car-emissions-and-global-warming**

[149] Alameda County, *2010 Climate Action Plan for Government Services and Operations Through 2020*, **https://www.acgov.org/sustain/documents/climateactionplan_executivesummary.pdf**

[150] *New York City Clean Fleet*, 2015; **http://www1.nyc.gov/assets/sustainability/downloads/pdf/publications/NYC%20Clean%20Fleet.pdf**

This chapter discusses the following vehicles and associated operation and maintenance products that can be included in a municipal green fleet procurement program.

- Light-Duty Vehicles (e.g., passenger cars, police cars)
- Medium-Duty Vehicles e.g., vans)
- Heavy-Duty Vehicles (e.g., buses, refuse trucks)
- Fuels
- Charging and Fueling Station Infrastructure
- Equipment with Two-Stroke Engines (e.g., lawn movers, boats, leaf blowers)
- Motorcycles
- Bicycles
- Auto Parts (e.g., tires, wheel weights, brake pads, lights)
- Lubricants (e.g., motor oil, penetrants)
- Coolants (e.g., anti-freeze and refrigerants)
- Batteries
- Other Fleet Maintenance Chemicals (e.g., vehicle wash/wax, degreasers)

The environmental and health benefits associated with a green fleet procurement program are compelling:

- Purchasing low-emitting vehicles can help municipalities comply with federal and/or state air pollution laws by lowering the amount of conventional air pollutants (that contribute to acid rain and smog) as well as diesel and hazardous air pollutants (that can contribute to asthma, lung cancer and heart disease).

- Choosing fuel-efficient vehicles, tires and vehicular equipment such as GPS and anti-idling technology, reduces consumption of petroleum, a non-renewable resource that causes environmental pollution problems when it is drilled, refined and burned in combustion engines.

- Transitioning to electric vehicles (particularly those powered with renewable energy) can prevent air pollution and consumption of petroleum and other fossil fuels, particularly in areas that generate electricity with a high percentage of renewable energy.

- Utilizing lo-toxicity fleet maintenance products can prevent human and environmental exposures to toxic chemicals such as lead in wheel weights, mercury in vehicle lights and switches, solvents in parts washing operations, endocrine disrupting chemicals in vehicular cleaning products, and copper in brake pads.

Municipal green fleet programs – which typically have an emphasis on changing the purchasing practices of fleet managers – are becoming increasingly popular for several reasons. Not only can they yield immediate and measurable environmental benefits, they also can protect the health of municipal employees, help the jurisdiction come into compliance with increasingly stringent federal and state air pollution laws, and save money.

Local governments are finding that they can save money immediately by downsizing their fleet, particularly when they retire aging vehicles. Fewer vehicles translate into lower maintenance, parking

and insurance costs. A green fleet procurement strategy that is gaining momentum – because it yields immediate cost savings – is negotiating contracts for car-sharing services and technologies. Municipalities can also save money over time by improving the fuel efficiency of their vehicles. The availability of federal and state subsidies for electric vehicles and other clean vehicle technologies also helps offset the high upfront costs.

Another incentive for local governments to undertake a green fleet program is to gain recognition and, in some cases, awards. Cities and counties across the US can receive a 100 Best Fleets Award and, starting in 2017, a national Green Fleets Award for deploying alternative and renewable fuels, idle-reduction measures, fuel economy improves, and emerging transportation technologies.[151]

BEST PRACTICES

Best Practice #1

Form a green fleet procurement team.

The creation and ongoing engagement of a Green Fleet Teams are often the foundation of an effective green fleet procurement program. The Team sets direction, implements the Green Fleet Procurement Policy, and provides feedback on progress. Harnessing the knowledge of the people using and maintaining the fleet will result in a successful program.

Green Fleet Teams focused on procurement often include a wide range of individuals and departments responsible for fleets and procurement strategies. Generally, the team is comprised of representatives from the following departments.

- Fleet Managers
- Environmental Health Representatives
- Finance Manager
- City Council Members
- Office of Sustainability
- Managers or representatives from Public Works, Aviation, Safety, Parks and Recreation
- Purchasing Department

Green fleet procurement teams are typically granted the ability to make decisions and carry out the following strategies to achieve their goals:

- Address cost-savings in addition to environmental benefits
- Identify upcoming contracting opportunities for vehicles and accessories
- Develop methods for ongoing monitoring and reporting

Case Study: Denver Establishes a Green Fleet Committee

The City and County of Denver, Colorado created a Green Fleet Committee that carries out the green fleet goals of the Office of Sustainability, including:

- Increasing the average fuel economy of the fleet
- Increasing the number of hybrid, alternative fuel, and fuel-efficient vehicles in the fleet

[151] Green Fleet Awards: 2015, http://www.the100bestfleets.com/gf_winners_2015.htm

- Minimizing the total vehicle miles traveled (VMTs) by employees using fleet vehicles

Denver's Green Fleet Committee meets regularly and is responsible for setting policy and monitoring progress to ensure that the City's green fleet policies are being implemented.[152] The Office of Sustainability established the Committee and set initial goals for greening Denver's fleet. Initially, the Committee was tasked with replacing older vehicles with more sustainable choices. Financial incentives were put in place to encourage departments to participate in the vehicle retirement program, including returning 20 percent of the vehicle's replacement cost and one year's operation and maintenance to the department. The Green Fleet Committee is also responsible for tracking fleet data (including fuel consumption and emissions). It reports annually and recently developed an anti-idling policy for the City's fleet.

Case Study: Nashville's Fleet Advisory Committee Guides Regional Green Fleet Program
The Nashville Fleet Advisory Committee was formed to help diversify the types of fuel used by the fleet. Other goals of the Committee include decreasing fleet vehicle emissions and support regional economic activity. In order to meet these goals, the Committee was tasked with developing a Metropolitan Government Green Fleet program, identifying priority replacements in the Metro fleet, and expanding the City's use of electric vehicles, hybrids and bio-diesel. "In June 2012, leveraging a Department of Energy grant, Nashville completed installation of more than 30 electric vehicle (EV) charging stations in targeted parks, community centers and public facilities to encourage electric vehicle usage in Nashville and Middle Tennessee. This regional green fleet program is part of a larger *Together Making Nashville Green Program*..[153]

Case Study: Ann Arbor's Green Fleet Team Develops Vehicle Procurement Policies and Procedures
The City of Ann Arbor, Michigan maintains a Green Fleet Team that is appointed by the City Administrator. The Team includes representatives from Environmental Coordination Services, Finance and Administrative Services, Safety Services, Community Services, and Public Services. According to the City's Green Fleet Policy, "The function of the Team shall be to develop and monitor policies and procedures related to the purchase of City vehicles and fuel-using equipment to achieve the goals and objectives of the program. The Team will report findings to the Energy Commission and Environmental Commission as appropriate."[154]

Best Practice #2
Adopt a green fleet procurement policy.

Green fleet procurement policies have been adopted by many cities and counties in the US and Canada over the past decade. They often signal a municipality's commitment to minimizing the environmental, health and financial impacts of the cars, trucks and buses that are used by jurisdiction to transport

[152] *City of Denver: Executive Order 123C*, March, 2013; **https://www.denvergov.org/Portals/728/documents/NDCC/NWSS%20RFQ%20Executive%20Order%20123.pdf**
[153] City of Nashville, Sustainability Report, 2015; **https://www.nashville.gov/Portals/0/SiteContent/MayorsOffice/Sustainability/docs/GRC_Report_150801.pdf**
[154] City of Ann Arbor, MI, *Green Fleet Policy*, 2005; **http://www.a2gov.org/departments/systems-planning/planning-areas/energy/Documents/systemsplanning_greenfleetspolicy_2005-07-01.pdf**

employees – and sometimes the public. Some green fleet policies are stand-alone documents that set high-level sustainability goals such as reducing fuel consumption and tailpipe emissions, assigning staff roles and responsibilities for improving the sustainability of the jurisdictions fleet vehicles, and reporting progress toward meeting the aforementioned goals. In other jurisdictions, sustainable procurement goals for fleet vehicles are incorporated into sustainable procurement policies or broader sustainability policies.

San Jose, California's *Environmentally Preferable Procurement Policy*, for example, directs City employees to "purchase fleet vehicles that provide the best available fuel efficiency and net reduction in vehicle fleet emissions."[155]

An effective green fleet policy typically mandates several procurement actions that will help the municipality meets its sustainability goals, including:

- Reduction of the fleet size;
- Establishment of procedures to identify vehicles ready for replacement and determine practical replacements with improved environmental performance based on a "best value" assessment; and
- Tracking and reporting mechanisms to verify that the policy's sustainability goals are being met and produce data on cost savings and environmental attributes that can be presented to decision-makers.

Case Study: Minneapolis, MN *Green Fleet Policy*
In 2010, the City of Minneapolis established a stand-alone green fleet policy,[156] which includes several important provisions:

- Creation of The Green Fleet Team
- Optimization of the Fleet Size (based on Fleet Baseline Analysis)
- Establishment of Procurement Guidelines for Replacement Vehicles (and a Justification for New Vehicles)
- Purchasing Preferences for Environmentally Friendly Vehicle Maintenance Products (e.g., re-refined oils, recycled coolants, retread tires, and equipment that eliminates lead, mercury and other persistent bio-accumulative toxic chemicals)
- Annual Progress Reporting
  This comprehensive green fleet policy may serve as a good model for your jurisdiction.

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[155] City of San Jose, *Environmentally Preferable Procurement Policy*, April 24, 2012; **https://www.sanjoseca.gov/DocumentCenter/View/3862**
[156] *City of Minneapolis Green Fleet Policy*, 2010; **http://www.minneapolismn.gov/www/groups/public/@council/documents/webcontent/convert_259214.pdf**
See also, article on how the City of Minneapolis' Green Policy was developed; **http://www.government-fleet.com/channel/green-fleet/article/story/2011/03/how-minneapolis-implemented-its-green-fleet-policy.aspx?interstitial=1**

Best Practice #3

Create a green fleet procurement implementation plan.

While a municipal green fleet policy often sets high-level sustainability goals (e.g., reductions in fuel use and tailpipe emissions), a green fleet implementation plan identifies specific practices and procedures that a jurisdiction is planning to put in place to meet those goals. The plan is likely to describe actions the jurisdiction is intending to take to downsize and optimize the fleet (such as negotiating price agreements for car-sharing services) or increasing the average fuel efficiency of the fleet (by securing discounts for electric cars, hybrids or other fuel-efficient vehicles).

It may also set milestones for expansion of your EV charging infrastructure on public properties, installation of biodiesel filling stations or establishment of bicycle-sharing system that can be used by municipal employees.

"Phasing in green fleet programs over time works best with measurable goals," according to the Institute for Local Government. The specific goals and strategies identified in the plan can be updated as the goals are reached.[157] Accordingly, green fleet action plans often establish milestones and key performance indicators (KPI) and articulate the methods the jurisdiction will use to demonstrate that its goals are being realized.

Case Study: New York City Adopts New Plan to Significantly Reduce Its Fleet Emissions

After meeting the 10 percent fleet emissions reduction goal New York City set in its 2009 *Clean Fleet Transition Plan*, it committed to fleet emissions reductions of 50% by 2025 and 80% by 2050 in its 2015 NYC Clean Fleet Plan, which it claims is "equivalent to decommissioning a 65 MW coal power plant in NYC." The City's new plan aims to achieve these ambitious reductions in greenhouse gas (GHG) emissions, diesel particulates and other pollutants in large part by undertaking several strategic procurement actions, including:

- Adding 2000 electric vehicles (EVs) to its fleet by 2020, which would give New York City the EV fleet of any U.S. city;
- Expanding the City's intra-agency car-sharing program;
- Purchasing and installing anti-idling, stop-start technologies that reduce engine activity when vehicles are stopped along with auxiliary battery systems;
- Increasing the fleet's use of biodiesel, renewable diesel (made from waste vegetable oil), and/or compressed natural gas (CNG) in place of conventional diesel; and
- Deploying scalable cutting-edge technologies throughout the City's fleet to displace the remaining GHG emissions. [158]

Case Study: Columbus, Ohio's *Green Fleet Action Plan Aims at Cutting Petroleum Use by 25%*

The City of Columbus, Ohio's *Green Fleet Action Plan* includes the following goals and supporting actions:

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[157] Institute for Local Government: *Information to Help Evaluate Green Fleet Options,* 2016; **http://www.ca-ilg.org/post/information-help-evaluate-green-fleet-options**

[158] City of New York, *NYC Green Fleet*, 2015; **http://www1.nyc.gov/assets/sustainability/downloads/pdf/publications/NYC%20Clean%20Fleet.pdf**

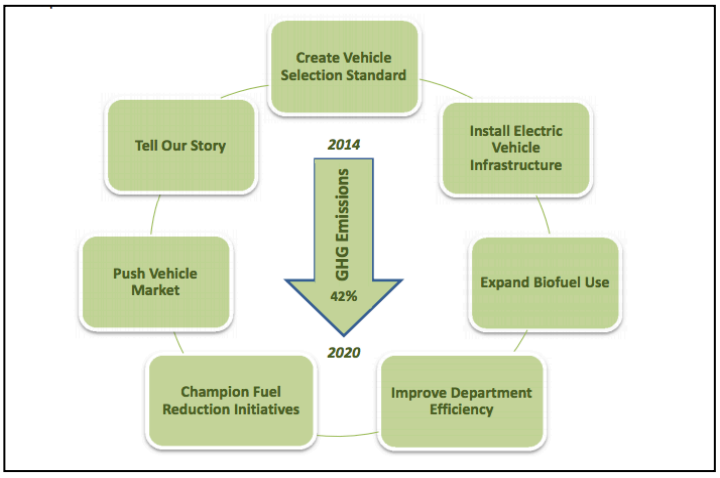
- Reduce annual petroleum use by 25% compared to 2014 levels by the end of 2018
    - Down-size and right-size fleets
    - Increase utilization of anti-idling technologies and telematics
- Increase green fleet vehicles
    - Replace with greener vehicles
    - Purchase green off-road equipment, where applicable
    - Increase electric and CNG vehicle use and infrastructure[159]

Case Study: Seattle, WA Developed a Comprehensive Green Fleet Action Plan

In 2015, the City of Seattle adopted *A Clean and Green Fleet: An Updated Action Plan for the City of Seattle* (2014), which set a goal of reducing its GHG emissions by 42% by 2020. Seattle refined and updated its original 2003 goals after 10 years of successfully operating a green fleet program.

Seattle developed a seven-step action plan aimed at reducing greenhouse gas emissions (GHGs), which includes several sustainable procurement actions. The seven steps include:

1. Creating Vehicle Selection Standards
2. Installing Electric Vehicle Infrastructure
3. Expanding Biofuel Use
4. Improving Department Efficiency
5. Championing Fuel Reduction Initiatives
6. Pushing the Vehicle Market
7. Telling Our Story[160]



The success of Seattle's action plan is credited to the participation of all City departments in the Green Team planning process. Developing targets and a baseline year for measuring metrics also contributed to ongoing evaluation and success. Seattle produces annual progress reports that not only highlighting where City departments are meeting the plan's metrics but also identifying barriers to overcome.

Case Study: Salt Lake City Develops Departmental Green Fleet Action Plans

Most departments (e.g., Police, Public Services, Fire, etc.) within Salt Lake City have developed emissions reduction plans for their vehicle fleet and small equipment. The City created a model *Tailpipe Emission and Greenhouse Reduction Plan* that various departments have used to create plans for their individual green fleet plans. Its sustainable fleet goals also include phasing out two-stroke engines (lawn mowers, leaf blowers, trimmers, etc.) in City maintenance equipment in favor of electric and/or four-stroke engines that are 10-30 times cleaner. [161]

[159] City of Columbus, Ohio, Division of Fleet Management, Green Fleet Action Plan (2015-2018), https://www.columbus.gov/uploadedFiles/Columbus/Programs/Get_Green/Key_Initiatives/Key_initiative_smart_forms/2015%20GFAP%20year%20end%20update.pdf

[160] City of Seattle: *A Clean and Green Fleet*, 2014; http://www.seattle.gov/Documents/Departments/FAS/FleetManagement/2014-Green-Fleet-Action-Plan.pdf

[161] Salt Lake City: *Green Air Quality*, 2016 http://www.slcgreen.com/air-slc

Best Practice #4

Assess current fleet attributes, usage, and purchasing practices.

Creating a baseline for your municipality's green fleet program is an important step for setting priorities and documenting environmental improvements and financial benefits. Assess the type and age of each vehicle in your fleet as well as the primary users and their needs and usage patterns, Understand your jurisdiction's procurement and end-of-life management practices. Some municipalities pick a benchmark year to start and a year by which to accomplish their goals. In jurisdictions where green fleet programs have been in place for some time, yearly reporting mechanisms assist in setting new goals and modifying baselines in order to demonstrate even greater monetary savings and environmental benefits.

Program planning tools exist that can help your fleet manager analyze your vehicles and recommend greener purchasing options. By calculating the total cost of ownership (TCO), a more accurate comparison of purchasing and owning fleet vehicles can be calculated. A typical fleet vehicle TCO assessment includes initial costs, maintenance and repair costs (which increase with vehicle age), fuel costs, insurance premiums and parking fees. Accurate current assessments can lead to lowering operational costs, and reduction of harmful emissions and maintenance practices.

Other baseline assessments a city or county is likely to undertake is to calculate the fuel usage and tailpipe emissions of their fleet vehicles. The U.S. Department of Energy has developed a fleet footprint calculator called *Greenhouse gases, Regulated Emissions, and Energy use in Transportation* (GREET), which enables users to measure petroleum usage and greenhouse gas (GHG) emissions of their medium- and heavy-duty vehicles and off-road equipment on a well-to-wheels (WTW) basis."[162] This tool can help local governments identify relatively inefficient and polluting vehicles to target for replacement, identify more fuel-efficient and less-polluting vehicle replacements, and calculate the environmental benefits of their cleaner vehicle purchasing decisions.

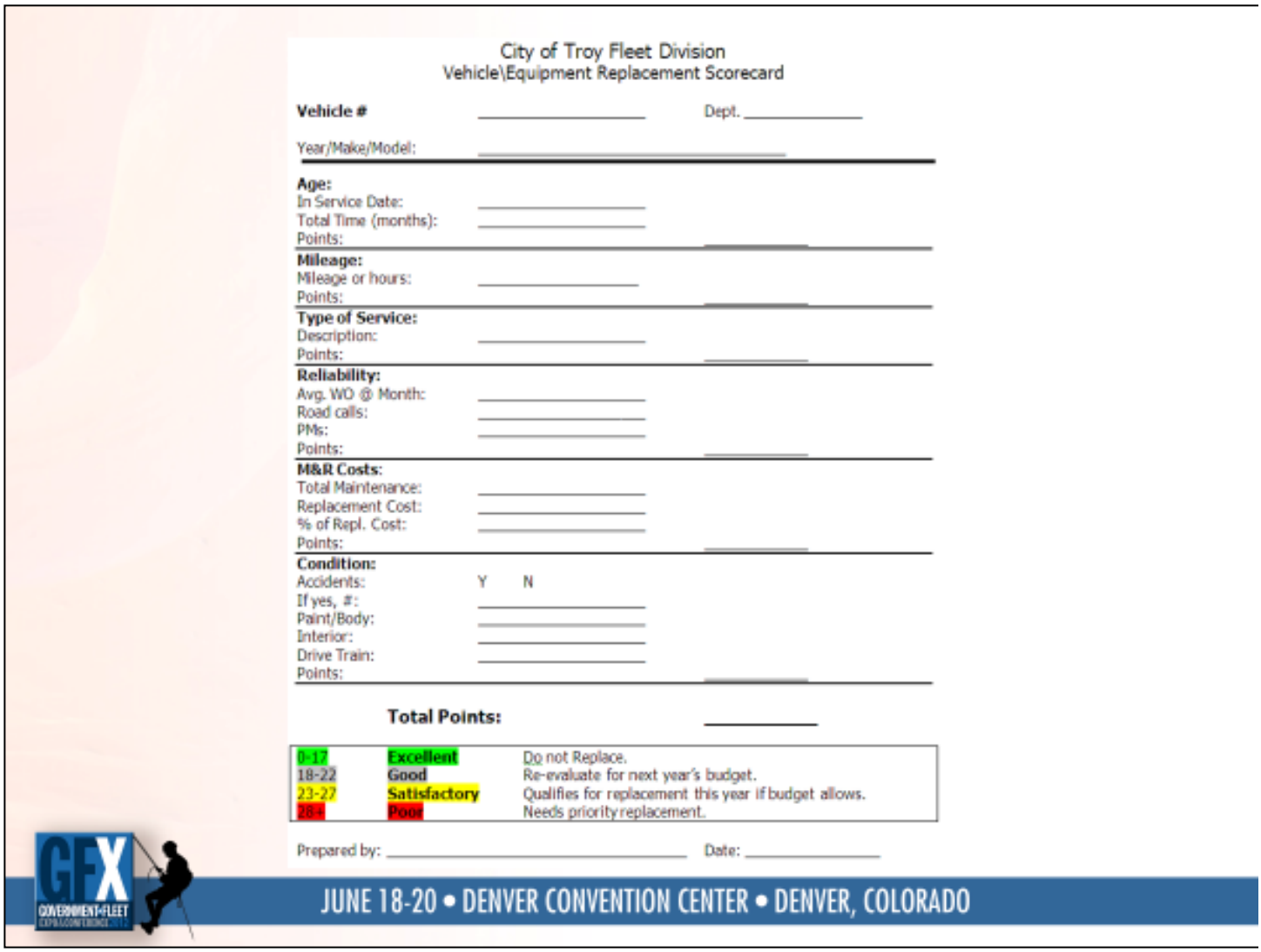
Some municipal fleet programs have developed their procedures and tools to identify cost-effective vehicle retirement and sustainable vehicle procurement opportunities. For example, the City of Fort Collins, CO has adopted the following sustainable vehicle replacement criteria:

- *Light-duty vehicles over 90,000 miles (i.e. cars/pickups/vans);*
- *Mowers over 4,000 hours;*
- *Utility trucks over 5,000 hours;*
- *Small dump trucks over 120,000 miles (gas); 150,000 miles or 500 hours (diesel);*
- *Tandem dump trucks over 150,000 miles;*
- *Backhoes/loaders over 8,000 hours; trailers over 10 years + condition;*
- *Sweepers over 8,000 hours; and*
- *Other equipment on a case-by-case basis.*
- *An economic and physical analysis is performed on all vehicles as well.*[163]

[162] *GREET Fleet Carbon and Petroleum Footprint Calculator*: 2012; **https://greet.es.anl.gov/fleet_footprint_calculator**
[163] City of Fort Collins Sustainability Goals; **http://www.fcgov.com/sustainability/goals.php**

Case Study: Troy, New York Creates a *Vehicle/Equipment Replacement Scorecard*

This resource tracks the age, mileage, reliability, maintenance and repair costs, and condition of each vehicle in the City's fleet. It relies on custom weighted ratings of local pollutants, GHGs, and lifecycle costs (upfront + fuel only) to assess vehicle purchase options. It uses a concept developed in Park City, UT that utilizes data from **fueleconomy.gov** to facilitate this analysis, allowing them to compare numerous fleet alternatives. While it does not include fueling infrastructure, it can be tailored to weight priorities by inputting various assumptions.[164]



City of Troy Fleet Division
Vehicle\Equipment Replacement Scorecard

Vehicle # _____ Dept. _____

Year/Make/Model: _____

Age:
In Service Date: _____
Total Time (months): _____
Points: _____

Mileage:
Mileage or hours: _____
Points: _____

Type of Service:
Description: _____
Points: _____

Reliability:
Avg. WO @ Month: _____
Road calls: _____
PMs: _____
Points: _____

M&R Costs:
Total Maintenance: _____
Replacement Cost: _____
% of Repl. Cost: _____
Points: _____

Condition:
Accidents: Y N
If yes, #: _____
Paint/Body: _____
Interior: _____
Drive Train: _____
Points: _____

Total Points: _____

0-17	Excellent	Do not Replace.
18-22	Good	Re-evaluate for next year's budget.
23-27	Satisfactory	Qualifies for replacement this year if budget allows.
28+	Poor	Needs priority replacement.

Prepared by: _____ Date: _____

[164] Salt Lake City: *Salt Lake City Green Fleets*, 2016 **http://www.slcgov.com/fleet**

Best Practice #5
Downsize your fleet.

One of the most important first steps a municipality can take to green its fleet – before simply replacing vehicles that are ready to be retired – is to downsize its fleet. Below are several important steps to take to accomplish this:

- Reduce the number of fleet vehicles. Various strategies are used by local governments to reduce the size of their fleets. Retiring under-utilized vehicles as well as those with relatively high fuel usage (e.g., SUVs), maintenance costs (e.g., vehicles that are old or have high odometer readings) or emissions (e.g., vehicles that are diesel-powered or that have two-stroke engines, including landscaping equipment) are strategies local governments can implement to gain environmental and cost benefits while reducing the fleet size. Identifying these and setting a schedule to optimize the use of the remaining vehicles may require additional coordination within or between government departments.

- Consider car-sharing technologies and services. Sharing vehicles can alleviate shortages arising from fleet reduction. Private car-sharing programs are taking root in a growing number of urban areas in the United States and Canada. These programs utilize GPS tracking and vehicle access technology to allow many people to use one or more vehicles. Car-sharing options for municipal fleets include:

    - *Negotiating discounted prices with a vehicle-sharing service* (e.g., Zipcar, Car2Go, etc.) to use their fleet vehicles, often in exchange for providing designated parking spots on government property.

      Washington, DC; Chicago, Illinois; Philadelphia, Pennsylvania; Berkeley, California; and Surrey, BC are among the cities that have negotiated contracts with car-sharing companies to expand their municipal fleet capacity.[165]

    - *Installing car-sharing technology* (hardware and software) in some or all of the jurisdiction's fleet vehicles to assist with reservations and tracking. The system is then managed either by the local government's fleet manager or by a private company through a service agreement.

      Boston (FleetHub) and **Houston** (Fleet Share) are examples of cities that are using car-sharing technology to manage their fleet. Both programs started in 2012 and are using ZipCar's scheduling and access system to enable employees to manage their own fleets. The program benefits include the ability to manage reservations online, key car access to vehicles, and location tracking.

[165] City fleet car-sharing programs: 2014; **www.govexec.com/state-local/2014/07/car-sharing-chicago-zipcar-indianapolis-blueindy/88141/**

Case Study: Chicago, IL Saves Money by Using Two Car-Sharing Services
The City of Chicago has been able to reduce its fleet size from 1000 to 650 vehicles by using two car-sharing services. City employees share Zipcars with residents, which supports this sustainable business. It also uses Chicago FlexFleet, which enables employees to share the City's fleet vehicles.

Contracting with these two car-sharing services has not only yielded environmental benefits, it has also saved the City a significant amount of money. According to Kevin Campbell, Manager of Fleet Services for the City of Chicago, "The Zipcar/Flex Fleet program is 25 cents per mile cheaper than the City-managed fleet…when using car sharing for every car you use it's a City vehicle you did not need to buy, so you're actually saving twice." The cost savings also include $200/month in parking fees for each vehicle that is avoided and significantly lower maintenance costs.[166]

Best Practice #6
Purchase vehicles with higher fuel efficiency and lower emissions.

Once a municipality's fleet is downsized and optimized, it can focus on replacing old, inefficient and relatively polluting vehicles with newer models. Some cities detail their vehicle replacement policies and procedures in their green fleet policy or plan. For example, the **City of Minneapolis** *Green Fleet Policy* requires all employees to carefully examine and consider the following sustainability issues before purchasing new or replacement vehicles:

- Justification for the vehicle
- Frequency of use (utilization) and suitability for intended job
- Light colors over dark to reduce air conditioning load in the summer
- Fuel efficiency and vehicle size
- Environmental impact
- Initial and long-term cost
- Safety and repair record
- Impact on technicians' workload
- Hybrid or alternative fuel vehicle availability or preference[167]

New York City has instituted several innovative sustainable procurement practices to reduce the environmental impacts and costs of their fleet. City employees are:

- Discouraged from purchasing SUVs: sedans are designated as the "default" passenger vehicles for City operations and all SUV purchases must be justified to (and approved by) the City's central procurement and budget agencies; and
- Required to submit plans to offset incremental fuel use and emissions impacts that would result if they want to "upsize" a vehicle when it is replaced.[168]

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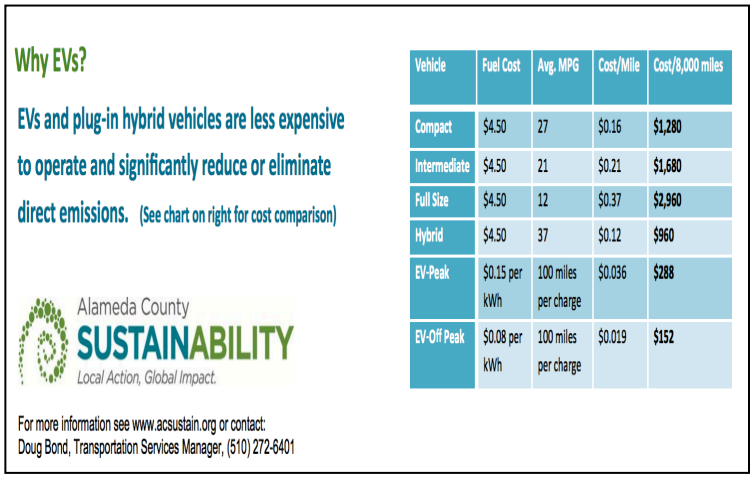
[166] "How Big Cities are Saving Big Bucks With Car Sharing," *Government Executive*, July, 9, 2014; http://www.govexec.com/state-local/2014/07/car-sharing-chicago-zipcar-indianapolis-blueindy/88141/
[167] *City of Minneapolis Green Fleet Policy*, December 2, 2010; http://www.minneapolismn.gov/www/groups/public/@council/documents/webcontent/convert_259214.pdf

Best Practice #7
Purchase hybrids and electric vehicles.

Two types of alternative fuel vehicles that are becoming increasingly popular are hybrid electric-gasoline vehicles and plug-in electric vehicles. Both offer environmental and economic benefits.

The Commonwealth of Massachusetts, offers two models of hybrid vehicles (Toyota Prius and Honda Civic Hybrid) on its state contracts, which are available for use by local governments. The state's environmental purchasing program explains:

> *The two main benefits of hybrids are increased fuel economy and reduced overall tailpipe emissions. Hybrids achieve double the fuel efficiency of the average car (50 mpg for hybrid, 25 mpg for conventional). Because hybrids use less gas per mile than the conventional car, hybrids will increase national security by reducing the U.S. dependence on foreign oil.*
>
> *Similarly, significant environmental benefits have also been realized through the introduction of hybrids. Because less gas is used per mile, HEV's emit less carbon monoxide (CO), non-methane organic gas (NMOG), nitrogen oxides (NO_x), and carbon dioxide (CO_2) than conventional cars. Reduced tailpipe emissions have also been linked to a decrease in the rate of respiratory illnesses, including bronchitis, emphysema, pulmonary fibrosis, and asthma.*
>
> *By using a more efficient gasoline engine, HEVs can go 7,500 miles or six months in between regular maintenance service.*[169]



Vehicle	Fuel Cost	Avg. MPG	Cost/Mile	Cost/8,000 miles
Compact	$4.50	27	$0.16	$1,280
Intermediate	$4.50	21	$0.21	$1,680
Full Size	$4.50	12	$0.37	$2,960
Hybrid	$4.50	37	$0.12	$960
EV-Peak	$0.15 per kWh	100 miles per charge	$0.036	$288
EV-Off Peak	$0.08 per kWh	100 miles per charge	$0.019	$152

Unlike hybrid vehicles, which never have to be plugged in (although some can be), plug-in EVs are entirely powered by batteries. According to **Alameda County, California**, EVs are the most cost-effective vehicle option on a cost per mile basis. Another major benefit of EVs is that they have absolutely no tailpipe emissions. (It is important to note that the environmental benefits of electric vehicles (EVs) will be different depending on source of electricity. So, when calculating tailpipe emission reductions, the source of electricity needs to be factored into final calculations. For example, if most electricity comes from coal-

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[168] City of New York, *NYC Green Fleet*, 2015; http://www1.nyc.gov/assets/sustainability/downloads/pdf/publications/NYC%20Clean%20Fleet.pdf

[169] Commonwealth of Massachusetts, Operational Services Division, Environmentally Preferable Purchasing Program, *EPP Products and Services: Hybrid (Gasoline and Electric) Vehicles*; http://www.mass.gov/anf/budget-taxes-and-procurement/procurement-info-and-res/procurement-prog-and-serv/epp-procurement-prog/green-products-and-serv/specific-epp-statewide-contracts/hybrid-gasoline-and-electric-vehicles.html#Top

powered plants, the switch to EVs will be less beneficial than if electricity is predominantly hydro-, wind-, or solar- generated.

Case Study: Portland, Oregon Reduces Idling Using Hybrid Trucks With Electronic Lift
The City of Portland has purchased a variety of hybrid trucks and vans that are equipped with electric motors that can power lifts and tools. This has reduced fuel consumption and tailpipe emissions by enabling drivers to use these functions without idling.[170]

Best Practice #8
Develop alternative fuel infrastructure.

Developing infrastructure, such as EV charging ports and biodiesel fueling stations is a critical part of a successful municipal green fleet program. Infrastructure that is installed on public property can sometimes be utilized local businesses and residents, which can help promote the use of green vehicles in the community.

The placement of electric vehicle charging stations throughout the jurisdictions can provide convenient refueling to government employees as well as residents. Powering these stations with solar power, when possible, provides an even greener alternative fuel vehicle (AFV) infrastructure. Pilot testing different options is an efficient way of determining which technologies are better for particular fleet applications.

Electric vehicle charging infrastructure should be networked into a system that enables approved users to locate stations and fleet managers the ability to their use as well as them amount of electricity that was consumed.

Case Study: San Diego Partners With Utility and Businesses to Create EV Charging Network For City Fleet and Community
The City of San Diego, California invests in electric vehicles by partnering with their utility and the private sector to install and locate EV charging stations throughout the city. This system is used by City employees, businesses and residents. Knowing where to charge an EV provides a greater level of comfort for those using the vehicles.[171]

Case Study: Palo Alto Transitions to EVs That Run on Carbon Neutral Electricity
In 2015, the City of Palo Alto, California applied its "default to green" purchasing strategy to its fleet purchases. Running on carbon-neutral electricity that is generated by its municipal utility, electric vehicle sedans became the standard, greener choice replacing the compressed natural gas (CNG) vehicles the City had been purchasing. In addition, the City installed PlugShare technology across Palo Alto, which made it more convenient for City employees using electric fleet vehicles as well as residents that drive EVs.[172]

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[170] City of Portland, Oregon, *City of Portland Green Purchasing Case Study*, April 2016; http://www.portlandoregon.gov/brfs/article/368277
[171] City of San Diego, CA, *Climate Action Plan*, 2015 http://www.government-fleet.com/channel/green-fleet/news/story/2015/12/san-diego-approves-climate-action-plan-for-green-fleet.aspx
[172] City of Palo Alto, CA: *Electric Car Charging Locations*, 2015; http://www.cityofpaloalto.org/gov/depts/utl/residents/sustainablehome/electric_vehicles/default.asp

Best Practice #9

Pursue strategies to reduce the upfront cost of green fleet vehicles and infrastructure.

Cities and counties can secure discounted prices for fuel-efficient and less-polluting vehicles by:

- Negotiating contracts (including service agreements) rather than purchasing each car individually
- Using a reverse auction process to attract even lower prices for vehicles, infrastructure, or preventive maintenance services
- Piggybacking on an existing price agreements that have been created by other cities or counties (to which a "me-too" piggybacking clause has been added)
- Utilizing a state contract: most states allow all local governments in their state to utilize their price agreements; some states allow local governments outside their state to utilize their contracts.
- Looking for green fleet vehicles that are offered through well-established cooperative purchasing organizations. This can eliminate the need to go through a competitive-bidding process on your own. For example, *US Communities*, a cooperative purchasing organization used extensively by local governments throughout the US offers electric utility carts, street-legal low-speed vehicles, and hauling trucks, through a price agreement that was negotiated by Kansas City, Missouri. To see contract documents, go to **http://www.uscommunities.org**
- Working with other municipalities to develop a price agreement that aggregates the demand from several jurisdictions. A few jurisdictions have had success with this strategy. See two examples below:

Case Study: Alameda County Lead a Multi-Jurisdictional Cooperative Purchasing Initiative for Electric Vehicles

Alameda County, California negotiated a contract that enabled nine other jurisdictions to access federal grant funds and competitive pricing to realize approximately $349,000 in savings for electric vehicles below suggested manufacturer retail prices.[173]

Case Study: Victoria, BC and District of Saanich and Cooperatively Purchase EVs

The City of Victoria in the Canadian province of British Columbia collaborated with the District of Saanich on a joint RFP to replace some mid-sized passenger vehicles in their respective fleets with electric vehicles (EVs). The collaboration between the two municipalities was an important factor in the eventual success of the procurement.

[173] Alameda County, *Climate Action Plan for Government Services and Operations Through 2020: Executive Summary, 2010*; **https://www.acgov.org/sustain/documents/climateactionplan_executivesummary.pdf**

Both the District and the City have sustainability specialists within their organizations that helped develop the joint contract and make the business case for transitioning to EVs. In addition, a prior pilot test of EVs by Saanich convinced both municipalities to commit to a larger purchase. The acquisition of EVs has reduced fuel consumption and carbon emissions for the District of Saanich and the City of Victoria. Other municipalities have also benefitted from this contract, as a "me too" clause was included in it. For example, nearby District of North Cowichan took advantage of this opportunity to purchase its first EV. This demonstrated how larger jurisdictions with more resources can help smaller jurisdictions access green fleet vehicles at a lower price.

Best Practice #10

Reduce diesel usage and emissions.

Local governments purchase a significant amount of diesel fuel to power their vehicles – particularly buses, trucks, and other heavy-duty vehicles– as well as back-up power generators and other equipment. In addition, a diesel fuel is used by municipal contractors in vehicles that perform municipal services – such as snow removal, garbage disposal and recycling, and landscaping – and that transport food, bottled water, office supplies and other goods that are used by city and county departments. According to the West Coast Climate and Materials Forum, which has created a suite of resources on safer alternatives to diesel fuel in its *Climate Friendly Purchasing Toolkit*, "The two largest uses of fuel by government institutions are diesel-fueled vehicles used for the transport of goods and operation of diesel-fueled on-road and off-road construction, renovation, and maintenance equipment and vehicles." [174]

Diesel engine exhaust causes serious public health and environmental impacts – particularly in urban areas. Diesel is a known human carcinogen that is linked to asthma, increased risk of heart attacks, and other health effects. The California Office of Environmental Health Hazard Assessment has listed diesel particulate as one of the five toxic air pollutants that causes the greatest harm to children.[175] According to the US Environmental Protection Agency, "Diesel exhaust also contributes to ozone formation (smog), acid rain, and global climate change." [176]

Municipalities can implement a few different strategies to reduce their diesel consumption:

- Replace diesel-powered vehicles (and equipment) with non-diesel (e.g., electric-powered) vehicles and equipment
- Purchase diesel-electric hybrid vehicles, which reduce diesel consumption
- Replacing diesel fuel with biodiesel (including renewable diesel)
- Installing diesel traps and other equipment to reduce diesel emissions

Case Study: King County is Performance Testing All-Electric Transit Buses

King County, Washington (in the Seattle area) conducted an intensive, year-long pilot test of three all-electric, battery- powered transit buses as part of its commitment to develop a fleet of 200 zero-emission

[174] West Coast Climate and Materials Management Forum: *Climate Friendly Purchasing Toolkit: Diesel Fuel*, 2016; **http://westcoastclimateforum.com/cfpt/fuels**

[175] California Office of Environmental Health Hazard Assessment (OEHHA), *Prioritization of Toxic Air Contaminants Under the Children's Health Protection Act,* 2001 (accessed September 24, 2016)

[176] US Environmental Protection Agency (Region 1: New England), *Diesel Exhaust and Your Health*, Undated website accessed on September 24, 2016; **https://www3.epa.gov/region1/eco/diesel/health_effects.html**

buses over the next five years. This experiment will determine whether the buses perform as well as the diesel and hybrid buses it currently uses. According to a King County Case Study, which received an innovation award from the Sustainable Purchasing Leadership Council (SPLC) in 2016:

> *Metro has been putting the buses through their paces. The first test operated one bus for 24 hours a day, 7 days a week for 105 days. Over 32,000 miles were logged in-city and on freeway driving with a weighted load. According to Climate Solutions, each of these electric buses will save Metro Transit as much as half a million dollars in fuel and maintenance costs over its lifetime—more than paying for the upfront investment that puts the buses on the road.*
>
> *The buses have fast-charge batteries that can be recharged in less than 10 minutes. They are designed to operate up to 23 miles between charges and get the equivalent of 15 miles per gallon more than a regular hybrid coach. The buses have no fuel system, engine cooling system, exhaust system or emissions treatment system, so maintenance and parts-replacement costs are expected to be lower than for diesel buses.*[177]

Case Study: Several California Municipalities Switch to "Renewable Diesel"


Clean Diesel – Diesel Technology

Oakland Moves to Renewable Diesel for City Fleet

October 16, 2015

Like 1 Tweet G+1 0 Share 1 Share 3 Print

On Oct. 5, the City of Oakland filled its first truck with renewable diesel. Pictured from left are: Richard Battersby, equipment services manager, City of Oakland; Pat O'Keefe, president/CEO of Nexgen Fuels; and Neville Fernandes, general manager, Neste USA. *Photo courtesy of PRNewsFoto/Golden Gate Petroleum*

Over the past few years, a fast growing number of local governments (including many USDN members such as the Cities of **Oakland**[178], **Sacramento**, San Diego, **San Francisco**, an Santa Monica[179] as well as **Alameda County**) have switched from conventional diesel fuel (which is derived from non-renewable petroleum) to renewable diesel (which is derived from plant oils and animal fats, mostly from waste sources).

Relatively new to the market, renewable diesel has several advantages over both diesel and biodiesel blends such as B20 or B5:

- It burns cleaners and, therefore, is significantly less polluting than diesel fuel; fleet managers have reported a 50-90 reduction in CO2 emissions, 33% reduction in particulate matter (PM 2.5), which is linked to asthma attacks; and lower emissions of other air pollutants such as NOX.
- It prevents vehicle downtime and cuts down on maintenance costs due to fewer clogged fuel lines and a less frequent need to change diesel particulate filters.
- It improves fuel efficiency.

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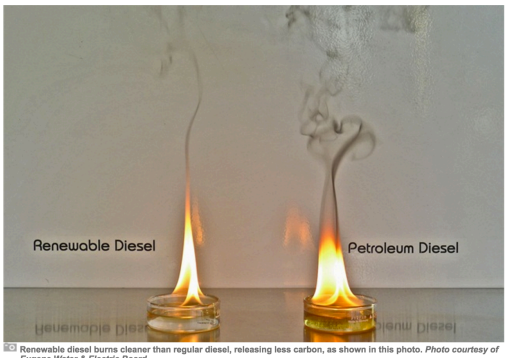
[177] Sustainable Purchasing Leadership Awards: 2016, **https://www.sustainablepurchasing.org/library/#kingcounty**

[178] "Oakland Moves to Renewable Diesel for City Fleet," *Government Fleet Magazine*, October 16, 2015; **http://www.government-fleet.com/channel/green-fleet/news/story/2015/10/third-calif-fleet-switches-to-renewable-diesel.aspx**

[179] "San Francisco's Renewable Diesel Halves Diesel Emissions," *Government Fleet Magazine*, December 14, 2015; **http://www.government-fleet.com/channel/green-fleet/news/story/2015/12/san-francisco-reduces-diesel-emissions-by-50-with-renewable-diesel.aspx**

- Unlike regular biodiesel, it can be used year-round even in cold climates and does not require any equipment retrofitting because it is chemically similar to conventional diesel fuel. According to *Government Fleet* magazine:

  Renewable diesel has the same chemical properties as petroleum diesel and it also meets the petroleum diesel specification (ASTM D975), allowing fleets to switch with no additional investment or engine modifications.



Renewable diesel burns cleaner than regular diesel, releasing less carbon, as shown in this photo. *Photo courtesy of Eugene Water & Electric Board*

- It is less expensive than B20 (especially in California due to state policies that support its use)

Best Practice #11

Purchase equipment to reduce vehicular fuel use.

Municipal fleet managers can equip their vehicles with various types of equipment designed to reduce the number of vehicle miles traveled (VMT), while maintaining the same level of service. This includes:

- **Global Positioning Systems (GPSs)** help drivers optimize their routes, enabling they can get to their destinations more efficiently.

- **Telematics**, which are systems that record a vehicle's location and operating information, help cities reduce their fuel use by identifying inefficient driving behaviors such as idling. Additional benefits of telematics equipment is that it can help fleet managers optimize their fleet size by identifying underutilized vehicles and alert them to the need for preventive maintenance, which avoids pollution problems and vehicle downtime.[180]

- **Anti-idling equipment**, which automatically shuts off a vehicle's engine while powering ancillary equipment.

Other products and services that can reduce vehicle use (and thus emissions) include:

- **Transit passes** for employees for work meetings
- **Telecom equipment** and online software for meetings instead of driving

Case Study: Washington, DC is Installing Anti-Idling Technology in Police Cars to Prevent Asthma

The Metropolitan DC Police Department is purchasing, installing and evaluating on-board batteries and idling controls in police cars that remain in one spot for long periods. This technology permits stationary cruisers to use required electronics without running their engines, which saves fuel and reduces vehicle

[180] Telematics. http://telematics.com

emissions. These installations are being targeted to vehicles that are used in areas of the city with high asthma rates.[181]

Case Study: Columbus, Ohio Has Installed Anti-Idling Equipment in its Police Cars

The City of Columbus has installed anti-idling technology in its SUVs to reduce emissions while it looks for less-polluting replacement vehicles for its police department. The system automatically turns off the engine once idling exceeds a pre-programmed amount of time, and continues to power other equipment, including heat and air conditioning.[182]

Case Study: King County, WA and Portland, OR Reduce Idling by Purchasing Hybrid Trucks With Battery-Powered Lifts

King County, Washington has purchased hybrid-electric trucks, including one with an electric-powered aerial life to cut down on vehicle idling. "We're easily seeing a 30 percent fuel savings with the new hybrid trucks," said Fleet Equipment Manager. "They have been performing at or above our expectations in all areas.[183]

Case Study: Chicago, Illinois Uses GPS and Telematics to Reduce Fuel Consumption and Monitor Emissions

The City of Chicago uses GPS fleet management systems to assist fleet managers using real-time vehicle location data to optimize routes and reduce excessive idling in an effort to reduce fuel consumption and greenhouse gas emissions. It also uses telematics track the number and type of vehicles in its fleet, monitor how they're being used, and the document the amount of each vehicle's tailpipe emissions.[184]

Best Practice #12

Add bicycles to your fleet.

There are many compelling reasons to incorporate bicycles into a local government's fleet. It not only curbs pollution and lessens traffic congestion, it also promotes health and well-being while saving money. Police departments often use bicycles in areas with limited car access in order to cover larger areas than can be accomplished on foot.

Case Study: San Antonio Purchases Bicycles for Police Patrols

The City of San Antonio, Texas' environmental fleet policy includes a directive to calculate the total cost of ownership when a vehicle purchase is considered and establishes a target of a 17% reduction in

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[181] District of Columbia, *Sustainable D.C. Final Plan*, 2012; **http://www.sustainabledc.org/wp-content/uploads/2012/10/SDC-Final-Plan_0.pdf**

[182] City of Columbus, OH; Government Fleet, Do Anti-Idling Technologies Work?, 2014; ***https://www.columbus.gov/uploadedFiles/Columbus/Departments/Finance_and_Management/Asset_Management_Group/Fleet_Management/Government%20Fleet%20-%20Do%20Anti-Idling%20Technologies%20Work.pdf***

[183] King County, Washington Environmental Purchasing Program, *Hybrid and Alternative Fuel Vehicles*, March 16, 2016, **http://www.kingcounty.gov/~/media/depts/finance/procurement/Documents/Environmental/EP_Products_Hybrids.ashx?la=en**

[184] City of Chicago: Fleets, 2016 **https://www.cityofchicago.org/city/en/depts/dgs/provdrs/fleet_operations.html**

emissions by 2020. As part of this effort, the San Antonio Police Department purchased bicycles to patrol specific areas of the city.[185]

In order for local governments to effectively incorporate bicycles into their fleets they not only need to purchase the bicycles and helmets, they also must install bike racks and bike storage infrastructure. But all of this is less expensive then purchasing and maintaining vehicles

Another option for municipalities is to negotiate a contract for bike-sharing services either just for government employees or for the community as a whole.

Case Study: San Francisco is First City to Use Bike-Sharing Program For City Travel

San Francisco was the first US city to allow its employees to use a community-wide bike-sharing program (CityCycle) as a fun, healthy and environmentally benign transportation option for getting to and from business functions. According to San Francisco Department of the Environment, "Employees can use bicycles for any reason they would otherwise use a fleet car, such as attending meetings, going on patrol, conducting outreach, managing park maintenance, and more." To ensure that bicycles would be reliably available, the City reserved 250 City-Cycle bikes for 23 departments.

According to the City's Fleet Services Manager, this program is saving money. "Maintaining and fueling cars obviously costs a lot more than maintaining bicycles," said Tom Fung, the City's Fleet Services Manager. "Promoting the use of bikes when they can be used for work trips, instead of fleet cars, makes sense for the City's budget," he said.[186]

Local governments can also encourage their suppliers to use bicycles when delivering products to them.

Case Study: Office Supplies Delivered to Portland, Oregon Via Electric Trike

Electric-assist cargo trikes like this one deliver office supplies to nine of the City's downtown offices.

The City of Portland, Oregon's vendor has been delivering office supplies by electric-assist cargo trike at no extra cost. According to the City of Portland, "By switching to trike delivery of office supplies, the City of Portland reduces carbon emissions associated with traditional delivery trucks." Also, "the City avoids over 7,700 lbs. of CO2 emissions annually through this "last mile" trike delivery program. Additionally, cargo trike delivery helps alleviate traffic congestion in the busy downtown Portland area. The City is not the only one that benefits from this service. Making deliveries by trike rather than by truck allows companies to use delivery trucks more efficiently (saving money and gas), especially in congested areas where parking can be a challenge. It's not uncommon for delivery trucks to circle downtown City blocks, waiting for the limited delivery zones to become vacant.[187]

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[185] City of San Antonio, TX: City Ordinance 2010-04-15-0335, 2010; **https://www.sanantonio.gov/Portals/0/Files/Clerk/.../20100415.pdf**

[186] City of San Francisco, *SF Environment Press Release: San Francisco City Employees Swap City Cars for City Bikes*, 2013; http://sfenvironment.org/news/press-release/san-francisco-city-employees-swap-city-cars-for-city-bikes

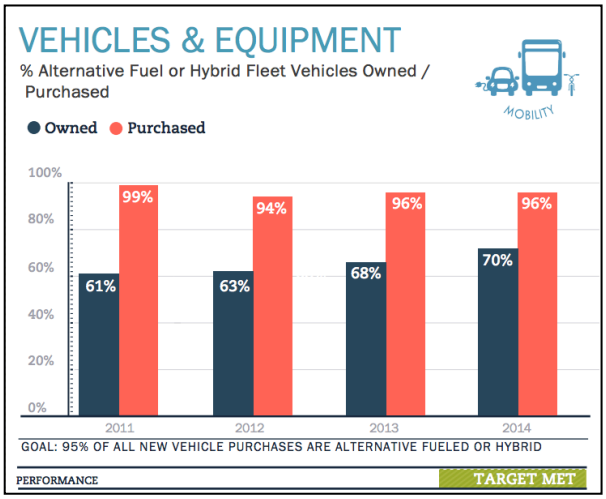
[187] City of Portland Procurement Services, *Portland Oregon Green Purchasing Case Study: Delivery of Office Supplies by Cargo Trike*, April 2016; **http://www.portlandoregon.gov/brfs/article/368280**

Best Practice #13

Track and report your green fleet procurement activities and impacts.

Green fleet procurement has been shown to yield monetary savings and environmental improvements. To ensure accurate data collection and reporting, which can help municipalities demonstrate the success of their green fleet procurement initiatives, investments in tracking (GPS) and reporting (telematics) technologies are needed. Annual evaluations of green fleet procurement actions and impacts can enable municipalities to refine their purchasing goals and practices based on real experiences.

Built-in annual evaluations enable a municipality's green fleet team to measure progress against the milestones articulated in its action plan. Benchmarking the current fleet composition, fuel consumption and other metrics enables them to identify additional sustainable vehicle procurement opportunities and resulting environmental and financial benefits.



Effective tracking and reporting also helps cities and counties gain recognition, and in some cases receive awards, because they are able to document measurable environmental benefits (such as reductions in fuel consumption and tailpipe emissions) as well as cost savings.

The **City of Austin, Texas** tracks the percentage of vehicles it that it purchased annually that utilize "alternative fuel" or are hybrids and shows how the percentage has changed over the past four years, which helps them to measure progress toward meeting the sustainability goal for this product category over time – that is, conduct a trend analysis.[188]

Case Study: Vancouver Documents Lower GHG Emissions Through Sustainable Vehicle Acquisition

The City of Vancouver, BC is reducing the greenhouse gas emissions of its fleet vehicles by "working closely with City departments to purchase vehicles that are smaller, more energy efficient, and/or use alternative fuels." In its *2014 Annual Procurement Report*, the City's Supply Chain Management (SCM) Department reported that the vehicles and equipment it acquired in 2014 are expected to reduce GHG emissions by 250 tonnes (276 US tons). This included:

- 66 downsized police patrol vehicles;
- 14 electric and sub-compact vehicles; and
- 2 hybrid refuse trucks.[189]

[188] City of Austin, Office of Sustainability, *Organizational Sustainability: Key Performance Indicators*, 2015, http://austintexas.gov/sites/default/files/files/KPI_October2015_Final.pdf

[189] City of Vancouver, Supply Chain Management Department, *Annual Procurement Report 2014*, March 31, 2015, http://vancouver.ca/files/cov/annual-procurement-report-2014.pdf

Vancouver attributed another 200 tonnes (220 US tons) in GHG reductions in its *2015 Annual Procurement Report* to the procurement of 30 police vehicles that are more fuel efficient than the ones they retired as well as 29 compressed natural gas (CNG) refuse trucks, which are less polluting than those that were previously running on diesel fuel.[190] In December 2015, the Province of British Columbia became the 14th jurisdiction to join the International Zero-Emission Vehicle (ZEV) Alliance. Consequently, Vancouver is committed to making all new passenger vehicle purchases ZEVs.

These sustainable vehicle acquisitions support Vancouver's *Greenest City Action Plan* goals of reducing transportation-related climate impacts. "The City has one of the greenest municipal fleets in the country with over 30 electric, 45 hybrid, and 29 compressed natural gas vehicles. The City is incorporating GPS and telematics technology to help optimize service delivery, route and fleet maintenance planning, and identify opportunities to reduce the fleet size. By redesigning business processes and optimizing the use of available modes of transportation for its operations, the City aims to improve productivity and service, reduce travel needs, reduce fleet costs, and support corporate environmental goals."[191]

Case Study: New York City Documents Fuel Savings and GHG Reductions by Purchasing Green Fleet Vehicles

New York City's Local Law 38, which was adopted in 2005, required the City to reduce its fuel consumption at least 20% by 2015 and purchase the least-polluting models when replacing at least 95% of its fleet vehicles. It exceeded its legal mandate by reducing its fuel consumption 50.7% by 2015. In addition, it documented that 98.6% of the light- and medium-duty vehicles – mostly cars and vans – it purchased since the law was passed a decade earlier were in the least-polluting class (based on California standards). It also documented a 25% decrease in CO2 emissions associated with the operation of its fleet vehicles.[192]

Best Practice #14

Purchase environmentally preferable fleet maintenance products.

The purchase of environmentally preferable fleet maintenance products is an integral aspect of green fleet program. Many products used to maintain fleet vehicles have can contract have alternatives that are less polluting. (e.g., tires, wheel weights, lubricants, antifreeze, refrigerants, degreasers, vehicle washing and waxing products, lights, etc.) [193]

Minneapolis, Minnesota's *Green Fleet Policy* Covers Vehicle Maintenance Products

- Purchasing preferences for environmentally friendly vehicle maintenance products
- Examples include re-refined oils, recycled coolants, retread tires, and equipment that eliminates lead, mercury and other persistent bio-accumulative toxic chemicals[194]

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[190] City of Vancouver, Supply Chain Management Department, *Annual Procurement Report 2015*, April 11, 2016, **http://council.vancouver.ca/20160420/documents/cfsc3.pdf**

[191] City of Vancouver, BC, Canada: *Greenest City Action Plan, 2020*; See **http://vancouver.ca/files/cov/greenest-city-2020-action-plan-2015-2020.pdf**

[192] New York City: Law 38, 2015; **http://www.nyc.gov/html/dep/pdf/air/local-law-air-reports-fy2015.pdf** and **http://www1.nyc.gov/assets/sustainability/downloads/pdf/publications/NYC%20Clean%20Fleet.pdf**

[193] US EPA: Safer Choice Car Care, 2016; **http://www.epa.gov/saferchoice/products#type=Car**

[194] City of Minneapolis: *Green Fleet Policy*, 2010; **http://www.minneapolismn.gov/www/groups/public/@council/documents/webcontent/convert_259214.pdf**

Washington, DC developed an *Environmental Specification Guidance for Automotive Products* for use by City purchasing agents.[195]

Below is some recommended guidance on specific green fleet maintenance products.

- Antifreeze
  Look for recycled anti-freeze and, where possible, products made of propylene glycol, which is less toxic than ethylene glycol.

- Brake Pads
  Look for brake pads that are copper-free.

- Lights
  Look for mercury-free lights in your vehicles.

- Tires
  Look for retread and low-rolling resistance options.
  - ***Retread Tires***
    - Cost 30-50% less than new tires
    - Prevent tire waste
    - Use only 7 gallons of oil to manufacture compared to 22 gal. for new tires
  - ***Low Rolling Resistance Tires*** reduce fuel consumption of trucks by 3-5% [196]

- Wheel Weights
  Wheel weights, which are used to balance tires during tire rotation, are usually made from lead. This can contaminate the environment along roadways with lead pollution if they fall off, and when vehicles are recycled if they are not removed. Look for lead-free options.

  Portland, Oregon has successfully switched to lead-free wheel weights. While they are slightly more expensive than lead weights, they can be more easily cut to custom size, reducing inventory, and are also corrosion resistant.[197]

- Re-refined Motor Oil
  - Prevents need for virgin petroleum because the base stock is recycled
  - Increases demand for used motor oil
  - Creates jobs in the US and Canada
  - Many brands are approved by the American Petroleum Institute (API)

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[195] Washington DC, Sustainable Purchasing Leadership Council Summit, 2015; **https://www.sustainablepurchasing.org/summit15/wp-content/uploads/sites/8/2015/06/Summit_2015_Presentation_Slides_Rifkin_Jonathan_Max_Sustainable_Purchasing.pdf**

[196] US EPA: SmartWay Program, 2016; **www3.epa.gov/smartway/forpartners/documents/trucks/techsheets-truck/420f10041.pdf**

[197] Portland, OR: *City of Portland Case Study: Lead-Free Wheel Balancing Tape*, 2016; **www.portlandoregon.gov/brfs/article/474136**

- Look for products that meet the US EPA's CPG recycled content guidelines of at least 25% post-consumer recycled base stock.

- Biobased Lubricants
  - Prevent need for virgin petroleum
  - Avoids costly cleanup, if spilled
  - Other performance benefits cited by users
  - Look for products that are listed by the USDA's BioPreferred Program (particularly those that are Biobased Certified).

- Parts Degreasers

  Vehicle maintenance shops use a wide array of chemical solvents to clean and degrease engine parts. Many contain chemical solvents such as Hexane, which can cause damage to the nervous system.[198]

  - Replace solvent parts washing equipment with aqueous-based cleaning equipment. Aqueous cleaners are non-flammable, safer to use, reduce air pollution and can last longer than solvent based products. Spray cabinets and ultrasonic aqueous units also save on labor and cost."[199]

  - Look for water-based, low-toxicity options including products that are certified by Green Seal or the US EPA's Safer Choice Program.

- Vehicle Washing and Waxing Products
  - Some contain nonylphenol ethoxylate, a potent endocrine disrupting chemical.

  - Look for certified low-toxicity options including products that are certified by UL EcoLogo or the US EPA's Safer Choice Program.

[198] California Dept. of Public Health: 2016; https://www.cdph.ca.gov/programs/hesis/Documents/nhexane.pdf.
[199] California Dept. of Toxic Substances Control: Pollution Prevention: 2016; **http://www.dtsc.ca.gov/PollutionPrevention/VSR.cfm**

Chapter 10: Sustainable Procurement in Action: Green Building Supplies

This chapter introduces sustainable procurement opportunities for green building materials and supplies and highlights best practices among USDN members and other local governments with exemplary sustainable purchasing initiatives focused on this category of products.

INTRODUCTION: WHY PURCHASE GREEN BUILDING SUPPLIES?

Buildings have a tremendous impact on human health, natural environments, and the local economy. The US Environmental Protection Agency estimates that "buildings account for: 39% of total energy use, 12% of total water consumption, 68% of total electricity consumption and 38% of the carbon dioxide emissions."[200]

Many resources already exist to help architects and builders construct and design green buildings. However, if those buildings are not maintained, repaired, and operated using sustainable products then the benefits of the original equipment and materials may be lost. This chapter will focus on the purchasing of sustainable products used in the maintenance, repair and operations (MRO) categories of building supplies, including:

Products such as paint, light bulbs, flooring, construction adhesives, and janitorial supplies can contribute disproportionately to a building's social, environmental, and economic footprint. Jurisdictions with policies requiring green building certifications (such as ENERGY STAR or LEED) must purchase sustainable building supplies in order to maintain certification for existing buildings. There are many reasons to purchase green building supplies, including:

- Healthy Indoor Environment. Many city and county workers spend a significant number of their working hours indoors. Green building materials can improve indoor air quality by minimizing exposure to harmful chemicals known to cause asthma, cancer and other health problems. Chemicals of concern include toxic flame retardants, volatile organic compounds, gases arising from building operations and heavy metals such as lead. By purchasing certified low-toxicity (and low-emitting) building materials and facility maintenance products (such as paint, floor polish, and cleaning products), local governments can substantially reduce occupational health and safety risks in public workplaces.

[200] US Environmental Protection Agency. "Why Build Green?" February 20, 2016. https://archive.epa.gov/greenbuilding/web/html/whybuild.html

- Cost Savings and Economic Benefits. Buildings use a significant percentage of the electricity, gas and water consumed by local governments. Improvements in energy- and water-efficient building products provide an opportunity for significant utility bill savings, which can impact up to 10% of many local governments' annual operating budget.[201] Efficiency improvements of existing buildings, whether through replacements or retrofits, can often pay for themselves within a matter of years. Local governments may also qualify for generous state and federal grants to fund efficiency improvement projects. [202]

- Environmental Benefits. Buildings' intensive consumption of materials, energy and water also presents an opportunity for sustainable purchasers to combat numerous negative environmental impacts. Deforestation, ozone depletion, climate volatility and water scarcity are all environmental externalities that can be ameliorated by government purchasing of green building materials. Buildings may also play a key role in moving jurisdictions towards leadership objectives for improved operational efficiency, reduced waste and lowered emissions.[203] For example, purchasing low-flow restroom or kitchen fixtures will decrease water use.

UNDERSTANDING LEADERSHIP IN ENERGY AND ENVIRONMENTAL DESIGN

Leadership in Energy and Environmental Design (LEED) is a credits-based standards program administered by the US Green Building Council (USGBC) and the Canadian Green Building Council (CaGBC). Building can earn LEED certification when they are being built, renovated or maintained. LEED standards are continuously updated and released in versions. LEEDv4 is the current version as of 2016; it has been in place since 2013.

There are four tiers of LEED certification: Certified, Silver, Gold and Platinum. While LEED does not certify individual building products, products with environmental or health attributes may help buildings qualify for LEED credits, which in turn will impact their certification. Therefore, LEED can provide useful guidance for championing and benchmarking the use of sustainable products in buildings.

The benefits of using a system like LEED to benchmark progress on purchasing green building supplies include standardization, transparency, access to training materials that aligns the goals of sustainable purchasing with operational cost savings. A building must file for recertification at least once every 5 years to maintain its LEED rating, forcing continuous improvement in sustainable purchasing of building products. Additionally, the LEED credit system is well-aligned with many of the best practices suggested in this *Playbook*. For example, one core requirement of earning LEED-EBOM is to "Have in place an Environmental Purchasing Policy (EPP) that includes, at a minimum, product purchasing policies for the building..."[204]

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[201] David Ribeiro "Chapter 2. Local Government Operations" in *2015 City Scorecard ACEEE*, 2015 (p. 20) **http://aceee.org/sites/default/files/publications/researchreports/u1502.pdf**

[202] US Environmental Protection Agency "Green Building: Funding Opportunities" February 20, 2016 **https://archive.epa.gov/greenbuilding/web/html/funding.html#state**

[203] US Environmental Protection Agency "Why Build Green? February 20, 2016 **https://archive.epa.gov/greenbuilding/web/html/whybuild.html**

[204] U.S. Green Building Council "Sustainable Purchasing Policy", 2016 **http://www.usgbc.org/credits/mrp1**

For municipal buildings, the three types of LEED certification available are:

- LEED BD+C (Building Design and Construction) is for buildings that are being newly constructed or are going through a major renovation.
- LEED ID+C (Interior Design and Construction) is for buildings getting a complete interior fit-out
- LEED O+M (Building Operations and Maintenance, also known as LEED EB:O&M) is for existing buildings that are undergoing improvement work or little to no construction.[205]

This chapter is focused largely on LEED EB O&M because it presents local governments with the greatest opportunity to use sustainable procurement to facilitate green building maintenance, repair, and operations. There are seven categories of LEED-EB O&M credits:

1. Energy & Atmosphere (credits available for purchasing energy-efficient equipment and renewable energy)
2. Indoor Air Quality (credits available for purchasing green cleaners, etc.)
3. Innovation
4. Location/Transportation
5. Materials & Resources (credit available for purchasing low-mercury lamps and other "sustainable consumables")
6. Sustainable Sites (credits available for purchasing a "cool roof")
7. Water Efficiency (credits available for purchasing water-efficient fixtures)

To become certified to the LEED EBOM standard, all prerequisites in each category must be met. Higher levels of certification such as silver, gold or platinum are awarded when additional credits are earned.

BEST PRACTICES

Best Practice #1

Create a green building team to develop contracts for sustainable building products.

Creating an effective green building team engages purchasing agents; members of your sustainability team; staff from infrastructure planning, design, and engineering groups; and facility maintenance staff who work in and around your government buildings. For example, when developing a new paint contract, your Green Building Team should encourage a head painter to join the Team and participate in the development of the specifications. Creating buy-in will help make the initiative successful. No matter how sustainable a paint specification is, if the painters don't want to use products purchased off that contract then positive results won't be realized. However, it is those same painters who may stand to reap the greatest benefits from a sustainable paints contract, since limiting their own exposure to Volatile Organic Compounds (VOCs) will improve their long-term health prospects. Facility managers make excellent candidates for a Green Building Team because they have experience working with

[205] U.S. Green Building Council "LEED", 2016 http://www.usgbc.org/leed

building products, so they will understand the technical requirements of specific products and can help to conduct pilot testing to ensure acceptable product performance.

Your team should meet regularly, divide roles and responsibilities, and clearly define strategic goals.

The **City of Calgary**, Alberta's *Sustainable Building Policy* states:

> *The General Managers of City departments and related agencies and societies whose responsibilities include planning, designing, constructing, managing, renovating, operating, and demolishing City-owned and City-financed facilities, working in conjunction with Infrastructure & Information Services, shall be responsible for ensuring that facilities and buildings comply with the "Sustainable Building Policy".*
>
> *The City shall maintain a **Sustainable Building Team**, consisting of representatives of Business Units involved in environmental and sustainable building practices, to provide input into reviewing and updating the Sustainable Building Policy, helping provide technical expertise on specific sustainable building issues and coordinating sustainable building knowledge and LEED™ (or other assigned rating system) training. The Sustainable Building Team is also responsible for assisting project managers to understand and apply The Policy and to help determine the most appropriate rating system and level.*[206]

Best Practice #2

Adopt a green purchasing policy for municipal building supplies.

A green building policy may be a stand-alone ordinance, executive order or administrative policy. However, it can also live as language in another policy such as in your jurisdiction's sustainable procurement policy or sustainability plan.

San Jose, California's *Environmentally Preferable Procurement Policy* directs City employees to "procure goods, products and services that support City LEED certification."[207]

Typically, a green building policy will direct the jurisdiction's employees and contractors to include sustainability criteria in some or all of its procurement decisions related to construction, renovation, and operation of municipally owned or operated facilities. The primary aim of such policies is to influence the types of construction materials, lighting and HVAC equipment, and facility maintenance products that are used by city or county employees and contractors, with some policies geared toward securing certification under the US or Canadian Leadership in Energy and Environmental Design (LEED) program.

Many local governments have focused their green building policies on improving the sustainability of their large building construction and renovation projects, but some cities and counties have gone further

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[206] City of Calgary, Alberta, *Sustainable Building Policy*, September 13, 2004. **http://www.calgary.ca/CA/city-clerks/Documents/Council-policy-library/cs005-Sustainable-Building-Policy.pdf**

[207] City of San Jose, California's *Environmentally Preferable Procurement Policy (EP3*), Revised April 24, 2012, **https://www.sanjoseca.gov/DocumentCenter/View/3862**

by adopting policies encouraging the purchase of energy-efficient and other sustainable products for the ongoing operation and maintenance of their facilities. Below are a few examples:

- **Cleveland, Ohio**'s *Sustainable Municipal Building Policy* exemplifies how it can be used to emphasize product categories germane to a building's operations and maintenance, rather than solely focusing on design and construction. It states. "The City of Cleveland shall incorporate green building practices into the siting, design, construction, remodeling, repair, maintenance, operation, and deconstruction of all City facilities." It explicitly refers to LEED-EBOM and encourages City employees to procure ENERGY STAR appliances, WaterSense faucets and toilets, reflective and vegetative roofs and permeable/reflective pavement.[208]

- **Denver, Colorado's** *Citywide Sustainability Policy* states, "All existing and future City-owned and operated facilities will incorporate all applicable LEED for Existing Buildings: Operations and Maintenance (LEED-EB O+M) best practices into facility operation and maintenance."[209]

- **Portland, Oregon**'s *Green Building Policy for City-Owned Facilities* states: "All occupied, City-owned existing buildings will pursue LEED for Existing Buildings Operation and Maintenance (EBOM) certification at the Silver level."[210]

- **Calgary and Edmonton in Alberta, Canada** also both specifically reference the application of their green/sustainable building policies to building operations.[211,212]

A strong green building policy will outline the roles and responsibilities of members of the Green Building Team. For example, the City of Winnipeg, MB has adopted a *Green Building Policy* that defines the roles and responsibilities for the following staff:

- City's Chief Financial Officer ("Ensure project budgets contain the required 5% investment funding for green building");

- Chief Operating Officer ("Support and promote projects governed by this policy");

- Project managers ("Document compliance with all policy requirements, ensure all bid documents comply with Policy"); and

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[208] City of Cleveland, *Sustainable Municipal Building Policy*, April 2013; **http://webapp.cleveland-oh.gov/aspnet/moc/Sust_Bldg_Policy_Cleveland-FINAL_April2013.pdf**

[209] City of Denver, Colorado, *Executive Order 123: Office of Sustainability and Citywide Sustainability Policy*, March 11, 2013; **https://www.denvergov.org/Portals/728/documents/NDCC/NWSS%20RFQ%20Executive%20Order%20123.pdf**

[210] City of Portland, *Green Building Policy for City-Owned Facilities Implementation Guide 2010*; **https://www.portlandoregon.gov/bps/article/304948**

[211] City of Calgary, Alberta's *Sustainable Building Policy*. September 13, 2004. **http://www.calgary.ca/CA/city-clerks/Documents/Council-policy-library/cs005-Sustainable-Building-Policy.pdf**

[212] City of Edmonton, Alberta's *Green Building Policy*, June 13, 2012; **https://www.edmonton.ca/city_government/documents/C567.pdf**

- Environmental Coordinator ("Communicate the policy within the organization, report GHG emissions associated with city green buildings, perform a biannual policy performance review").[213]

By clearly delineating staff roles and responsibilities, Winnipeg's *Green Building Policy* lays the groundwork for the Green Building Team's success.

Additionally, a municipal green building policy may direct departments to benchmark sustainable purchasing using Key Performance Indicators (KPIs), such as energy consumption.

For example, **Salt Lake City, U**tah issued an Executive Order, *Comprehensive Energy Management of Salt Lake City Facilities (2015),* that asks departments to measure their energy use and identify opportunities for improving energy efficiency. By requiring tracking and reporting of energy in its policy, Salt Lake City provides staff with the data necessary to make a strong business case for further improvements.[214]

Sustainable Infrastructure Policy

Traditionally, green purchasing has been largely limited to products and services that are utilized in the daily operations and has not been applied to large capital infrastructure projects such as the construction of roads, bridges, and water treatment facilities. Recently, that has started to change. A few cities have adopted sustainable procurement policies that apply to infrastructure projects.

In July 2015, **Tacoma, Washington**, adopted a *Green Roads Policy,* which commits the City to designing, constructing and maintaining its roads and other transportation infrastructure in a way that promote environmental, economic and social stewardship.[215]

Best Practice #3

Assess your municipality's current procurement practices (and specifications) for building equipment and supplies.

Conducting an assessment of your jurisdiction's MRO procurement practices is a vital part of measuring success against your green building Key Performance Indicators (KPIs). First, consider what existing commodity and service contracts should be included within your Green Building Team's assessment. Second, ask your purchasing and contract managers for a calendar showing when existing contracts expire and new contracts will go out to bid. This calendar may even be available publicly through an online portal that is designed to alert vendors of upcoming business opportunities. By tracking the lifecycle of contracts for building supplies, your Green Building Team will be able to focus strategically

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[213] City of Winnipeg, *Green Building Policy: New City-owned Buildings and Major Additions,* 2011 **http://www.winnipeg.ca/finance/findata/matmgt/documents//2013/401-2013//401-2013_Appendix_D_City_of_Winnipeg_Green_Building_Policy_New_City-Owned_Buildings_and_Major_Additions-December_2011.pdf**

[214] City of Salt Lake *Comprehensive Energy Management of Salt Lake City Facilities*, 2015; **http://www.slcdocs.com/slcgreen/energyefficiencyexecutiveorder.pdf**

[215] City of Tacoma, *Green Roads Policy* (Resolution No. 38945), July 8, 2014, **http://cms.cityoftacoma.org/sustainability/Resolution_No_38945.pdf**

on which product categories to develop specifications around. Third, get as much data as possible out of your jurisdiction's accounting system to determine how much money your jurisdiction is currently spending on building supplies. This will help your Green Building Team determine where opportunities may exist for the greatest alignment of environmental benefits and cost savings. By collecting data about your jurisdiction's procurement practices, your Green Building Team will begin to communicate sustainable purchasing goals, forge alliances with disparate stakeholders, build a robust business case and set baselines to track and report on the success of green building purchasing initiatives.

If there is an existing contract in place for building supplies, your Green Building Team may also be able to get information from your vendors. Financial data from your jurisdiction's accounting system can be supplemented with spending data from vendors, and the collection of such data can even be required by the terms of a purchasing contract, as in the case of the City and County of San Francisco, CA[216]. Your Green Building Team will gain insight into the contracting practices used by your jurisdiction to purchase building supplies by completing such an assessment.

Best Practice #4

Conduct a baseline assessment of building equipment and supplies (including lifecycle costs of energy and water use, etc.).

The purpose of conducting a baseline assessment of your jurisdiction's current building supplies is to identify strategic opportunities where sustainable purchasing practices can make a difference. The point of conducting such an assessment is to gain a fundamental and specific understanding of what building supplies your jurisdiction is currently buying. You will want to look at the building supplies contracts identified in Best Practice #3, however, the existence of a contract does not tell the whole story – you will need to track what products were actually purchased. This assessment will identify how much money your jurisdiction is currently spending on building supplies, and in what categories.

This data is not always centralized in one place and may live with building professionals in different parts of your organization. In some cases, it may be useful to go into the supply closet, unscrew light bulbs from fixtures, or conduct technical interviews with building maintenance professionals and facility managers. Facility or warehouse managers may keep a binder or database of Material Safety Data Sheets (MSDS) related to products they routinely purchase or use. This data can be an excellent resource in conducting your baseline assessment.

Conducting this assessment can help identify strategic opportunities for your Green Building Team to advocate for relevant and timely sustainable purchasing wins. For example, if your assessment uncovers that one of your jurisdiction's facilities is planning a re-carpeting soon, that means there will be an opportunity for your Green Building Team to make the case for a low-emitting, nontoxic carpet with a multi-attribute third-party certification. The baseline assessment will also allow you to develop an understanding of the volume and regularity with which different categories of building supplies are

[216]Using Microsoft Excel, Jessian Choy at SF Environment has created a set of standardized templates with drop-down menus to enable vendors to quickly select which product was purchased. Drop-downs minimize friction in collecting of purchasing data, and also ensure that the data won't contain any typos. Since typos may create problems for Microsoft Excel's quantitative analysis functions, San Francisco saves time by using a process that automatically formats the data entry. (Interview with Jessian Choy conducted by Responsible Purchasing Network, July 25, 2016)

procured, enabling the Team to focus on high-volume commodities that may represent the greatest opportunities for improvement.

Best Practice #5

Develop a green building supplies procurement plan for your municipality.

The purpose of a Green Building Action Plan is to align your jurisdiction's procurement practices with existing government sustainability goals, such as reducing waste, energy consumption or GHG emissions. Once these priorities are toggled to the calendar of upcoming contracts, your Green Building Team will be able to construct a Green Building Action Plan that will forecast opportunities for substantial, measurable achievements on contracts for green building materials. Priorities may include minimizing existing liabilities (e.g., products with toxic hazards), focusing on high-spend items (e.g., janitorial supplies and equipment) or high-impact items (e.g., light bulbs).

If earning LEED certification is one of your jurisdiction's sustainability goals, then you can look for product attribute alignments such as ENERGY STAR-certified appliances, or UL GREENGUARD Gold certified (low-emitting) materials[217] that will earn LEED credits. Your Green Building Team may also want to be conscious of current events pertinent to sustainability. For example, serious drought conditions may justify the procurement of water-efficient building products. By aligning with the broad sustainability issues driving your jurisdiction public policy, Green Building Teams can effectively communicate the value of purchasing sustainable building supplies to your mayor, city manager, or other decision-makers.

The **City of Edmonton, Alberta's *Green Building Plan*** explicitly states the ways in which green building supports and works toward higher level goals and priorities for the City, in environmental, health, and socio-economic realms. For example, the plan states that it "has been developed to support *The Way We Green: The City of Edmonton's Environmental Strategic Plan*…[addressing] Edmonton's sustainability and resilience challenges relating to energy and climate change, water, food, air, solid waste, and biodiversity. Amongst these, energy and climate change were considered priority areas by the experts and stakeholders who helped develop *The Way We Green*, as these two critical issues pose the greatest sustainability and resilience challenges for Edmonton."[218]

Additionally, a jurisdiction may decide to improve their procurement practices within a product category simply because it is innovative to do so. For example, San Francisco's decision to improve the sustainable procurement of their disinfectants was done primarily out of the understanding that not much research had been done on this product category. Disinfectants was thus recognized as an area in which San Francisco could play a strong leadership role.

[217] U.S. Green Building Council, "Low-Emitting Materials Third Party Certification Table." **http://www.usgbc.org/resources/low-emitting-materials-third-party-certification-table**
[218] The City of Edmonton, Alberta's *Green Building Plan.* June 20, 2012. **https://www.edmonton.ca/city_government/documents/PDF/GreenBuildingPlanFINAL(low_res).pdf**

Best Practice #6

Identify upcoming contracting opportunities for green building products and services.

When evaluating contracts for building materials, it is important to look at both commodity contracts and service agreements. High-spend commodity contracts for building supplies typically include those that offer a wide array of maintenance, repair and operations (MRO) products (sometimes called industrial supplies); janitorial chemicals, equipment and supplies; and electrical materials.

Additional, opportunities exist with contracts for individual building supplies such as:

- Appliances
- Lighting equipment
- Carpeting and flooring
- Construction adhesives and sealants
- HVAC equipment
- Paints and coatings
- Plumbing equipment
- Power equipment (such as solar generators)
- Water heaters

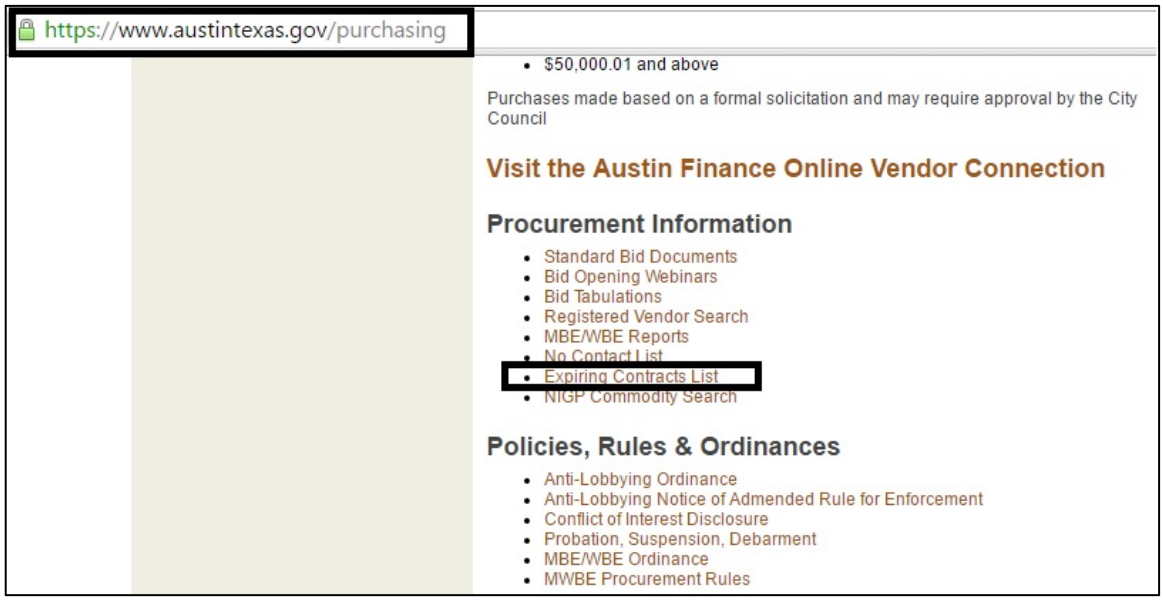
Significant sustainable procurement opportunities are also presented by service agreements for:

- Facility maintenance
- Custodial services
- Building repair and renovation
- Landscaping
- Pest management
- Paint services
- Large building and infrastructure construction projects

Moreover, many cities and counties that have implemented comprehensive sustainable procurement programs have learned that it is important to develop specifications for whole categories of products that can be applied to multiple contracts for commodities and services. For example, the development of specifications for paint can be applied to contracts for paint and maintenance supplies as well as painting and maintenance service agreements.

To identify upcoming contracts, look to see if your jurisdiction's purchasing department maintains a portal to notify vendors of upcoming contracting opportunities. If it does, look for building material commodity contracts and service agreements that are set to expire within the next 6 to 18 months, so that you have sufficient time to address them. In addition to large individual contracts, track multiple contracts for similar types of products or services. For example, some cities negotiate many separate contracts for facility maintenance to which the same specification can be applied.

The **City of Austin, Texas** maintains the following portal at **www.austintexas.gov/purchasing**. Below we have indicated the web address and the link for expiring contracts:



By clicking on this link, a Green Building Team can locate a PDF document that lists City of Austin's contracts by expiration date and includes a description of the contracts along with dollar amounts. This can help your Green Building Team to strategically prioritize product categories based on upcoming contract opportunities, but with enough lead time to get specifications ready for your purchasers far in advance of the bid date. For example, City of Austin indicates that a relatively large Maintenance, Repair and Operations (MRO) contract is set to expire (see table below).

Contracts Expiring from March 2016 through August 2016

Contract Number	Contract Description	Vendor Count	Vendor Name	Contract Amount	Start Date	Expiration Date
GC130000008	MRO Contract	3	APPLIED INDUSTRIAL TECHNOLOGIES INC	$15,000,000.00	7/22/2013	6/22/2016

Purchasing can require the approved vendor on its MRO contract, Applied Industrial Technologies, Inc., to submit historic contract usage information, including a list products purchased by city agencies on the contract with dollar amounts and quantities. Such data will help the Green Building Team identify opportunities for improvement when the contract is rebid.

Best Practice #7

Develop sustainability specifications and contracting strategies for high-spend/high-impact building materials, equipment, and supplies.

After strategically selecting the upcoming contracts that your Green Building Team will focus on, the next step is developing sustainability specifications and contracting strategies. There are several ways to go about this.

One effective way to begin developing a robust specification involves selecting products to block from the contract entirely.

In 2005, **New York City** became the first major US city to ban inefficient incandescent light bulbs from their operations.

Another approach involves blocking hazardous chemicals or attributes from an entire product category.

Boston, MA requires through their *Dept. of Neighborhood Development Multifamily New Construction Design Requirements and Guidelines* (2014) that all "all medium-density fiberboard (MFD) used in cabinetry and countertops shall be formaldehyde-free," and "Paint, stains and varnishes should be limited to low (50 g/L) or no VOC, except as noted."[219] By demanding the elimination of a hazardous chemicals or setting a maximum threshold for VOCs, Boston safeguards the residents of affordable housing projects from numerous serious health risks.[220]

Since many building supplies may multiple environmental attributes, it can be helpful to rely on trusted third-party certifications when developing specifications. However, this does necessitate navigating the landscape of third-party certifications. For example, adhesives covered by all of the following certifications: Cradle to Cradle, Green Seal, SCS FloorScore, UL GREENGUARD, UL EcoLogo, and Carpet and Rug Institute (CRI) Green Label Plus. In such cases, the Green Building Team should prioritize the specification of third-party certifications that cover multiple attributes, rather than a single attribute. For example, Cradle to Cradle is a multi-attribute certification that evaluates environmental and health impacts arising from a product's manufacture, use and disposal. In contrast, SCS FloorScore is a single-attribute certification, only measuring a flooring product's impact on indoor air quality.

Finally, Green Building Teams can develop specifications that require vendors to remain engaged throughout the life of the contract.

Portland, Oregon requires its vendors provide quarterly usage reports and recycling services for unused paints, including drop-off and take-back options. By writing these requirements into the contract, Portland has been able to communicate the importance of sustainable purchasing to its vendors and ensure that the benefits of sustainable paints are being realized in practice.[221]

Although developing specifications for green building supplies may sometimes seem daunting, there is no reason that purchasers should feel compelled to re-invent the wheel. Green Building Teams can save time by utilizing research, sustainability specifications, vendor survey questions and other bid solicitation documents, and model contract language that have been created by other government purchasers. When doing so, however, check to make sure that they are up-to-date and meet the needs of your jurisdiction. It is important to note that some sustainability attributes – such as recycled content or VOC content – is not verified by a third party. For those products, the Purchasing Department may want

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[219] City of Boston "Dept. of Neighborhood Development Multifamily New Construction Design Requirements and Guidelines", 2014; **http://dnd.cityofboston.gov/portal/v1/contentRepository/Public/dnd%20pdfs/HousingDevelopment/14-1_Design_Standards-Final-August_2014_leed_rev.pdf**

[220] Nabihah Maqbool, Janet Viveiros, and Mindy Ault "The Impacts of Affordable Housing on Health: A Research Summary" *Insights from Housing Policy Research*, The Center for Housing Policy, April 2015 **http://www2.nhc.org/HSGandHealthLitRev_2015_final.pdf**

[221] City of Portland *Sustainable Procurement Specifications Excerpt, Paints and Related Supplies* (February 13, 2014); **https://www.portlandoregon.gov/brfs/article/497910**

to request documentation of compliance during the bid solicitation process or reserve the right to do so while the contract is in place, if questions arise.

Below are some examples of sustainable procurement resources for building materials:

- **New York City** created a set of procurement specifications for environmentally preferable building construction and facility maintenance products, *Minimum Standards for Construction Products.*[222] This resource covers appliances, architectural coatings, HVAC equipment, lighting products, plumbing fixtures, and other miscellaneous construction products, and identifies minimum standards for each product type, requiring third-party certifications of environmental claims when certified products are readily available.

- **US Communities,** a national (US-based) cooperative purchasing organization primarily for local governments) Environmental included the following vendor survey questions in its RFP for maintenance, repair and operations (MRO) products:

    1. Provide a brief description of any company's environmental initiatives, including your company's environmental policies and/or strategies, your investments in being an environmentally preferable product leader, and any resources dedicated to your environmental strategy, including staff.

    2. Describe your company's process for defining, verifying, and labeling green/sustainable products and services in your offering. Explain how you help public agencies navigate toward the green products in your offering through website filters, keyword searches, displaying eco-logos, etc.

    3. If applicable, list products in your offering that have any third-party environmental certifications, such as:

        - Biodegradable Products Institute (e.g., compostable bags, food service ware, etc.)
        - Consortium for Energy Efficiency (lamps)
        - Cradle to Cradle (e.g., building materials, construction adhesives, paint)
        - Design Lights Consortium (e.g., LED lighting equipment)
        - ENERGY STAR (e.g., appliances, HVAC and lighting equipment)
        - Green Seal (e.g., cleaners, hand soap, janitorial paper products, paint)
        - Master Painters Institute (MPI) Green Performance Standard (paints and coatings)
        - NEMA Premium Efficiency (e.g., motors, ballasts)
        - Scientific Certification Systems (SCS) FloorScore (e.g., carpet, flooring, flooring adhesives, underlayment, etc.)
        - Scientific Certification Systems (SCS) Indoor Advantage (building materials, furniture, etc.)

[222] *New York City Environmentally Preferable Purchasing (EPP) Minimum Standards for Construction Products,* June 2012; **http://www1.nyc.gov/assets/mocs/downloads/pdf/epp/nycepp_construction.pdf**

- UL GREENGUARD (adhesives, flooring, insulation, sealants, etc.);
- UL EcoLogo (cleaners, deodorizers, hand soaps and sanitizers, floor polish and strippers, etc.)
- USDA Biobased (lubricants, building materials, etc.)
- US EPA Safer Choice (cleaners, hand soaps, deicers, floor maintenance chemicals)
- WaterSense (water efficient fixtures, toilets, etc.)

4. If applicable, does your company have a chemicals policy? Do you restrict any chemicals of concern in your products beyond what is required by federal and state laws? Does your company label products that are on the California Prop 65 list of chemicals that are known to the State of California to cause cancer, birth defects or other reproductive harm?

5. Does your company label any products in your offering that are free of chemicals of concern, such as mercury, lead, PVC (vinyl), phthalates, flame retardants, neonic pesticides, etc.? If yes, describe what you do in this area.

6. Does your company provide links to products' SDS/MSDS sheets and/or Health Product Declaration or Environmental Product Declaration Forms?

7. Describe your company's recycling services. Describe any buy back or take back options offered for products sold on this contract such as batteries, mercury-containing equipment, paint, chemicals, etc. Describe your company's efforts to reduce or reuse packaging (or avoid difficult-to-recycle packaging such as polystyrene foam) and minimize the environmental footprint in the shipping process.

8. What percentage of your offering is environmentally preferable and what are your plans to improve this offering?[223]

In addition, by aggregating demand from multiple entities and using cooperative purchasing agreements, it is possible for Green Building Teams to save their jurisdiction money.

Examples from this Playbook can be used as templates by governments looking for tested strategies to achieve sustainable procurement success. In some cases, it may even be possible to piggy-back on green building supplies contracts from other jurisdictions that are known to have robust sustainability specifications. This technique can sometimes be used to purchase sustainable building supplies even before an existing contract has expired.

[223] Maricopa County Bid 16154-RFP: Maintenance, Repair and Operating Supplies, Industrial Supplies and Related Products, August 4, 2016; **http://www.uscommunities.org/fileadmin/hb/usc/Solicitations/16154_Packet_for_Bid.pdf**

Best Practice #8

Negotiate discounts for sustainable building materials, supplies, and services.

There persists an inaccurate perception among many purchasers that "green" supplies necessarily come with a higher price tag. In practice this is often not true. However, vendors will sometimes charge more for green products simply because green attributes are seen as a differentiating factor in the marketplace. Hence, the belief in pricey "green" products can become a self-fulfilling prophecy. Such premiums may even produce the perverse consequence of discouraging building maintenance professionals from taking advantage of green building supplies on contracts, even if they have been otherwise encouraged to do so. That's why it remains vital to negotiate for price discounts specifically on green products offered on a contract, rather than on the contract as a whole.

While category-wide discounts are certainly desirable, it is also important to prioritize *relative* discounts that make green building supplies less expensive for building maintenance professionals than their conventional less sustainable alternatives. If your municipality's purchasing practices tend to favor negotiation on an entire contract or a "market basket," consider asking vendors to submit a market basket for an all-green contract. By negotiating prices on an all-green contract, your purchasers may be able to achieve greater discounts on the green products than if the contract was a mixed-green offering that included both sustainable and unsustainable products.

Best Practice #9

Promote utilization of contracts for green building materials, supplies, and services.

Once the work of developing specifications and negotiating discounts is completed, building maintenance professionals must be familiar enough with the green product offerings to utilize the contracts. That is why it is important to bring building maintenance professionals and facilities managers onto your Green Building Team early on in the process, consulting with them on the development of specifications to make sure that high-volume green products will be accessible and desirable from a performance and cost perspective.

However, your Green Building Team may also write into the contract a requirement that the vendor provide training sessions to your jurisdiction's maintenance staff at every facility. These training sessions should be designed to introduce maintenance staff to innovative green products while communicating the benefits of sustainable building supplies. Both the vendor and the staff should become familiar with the benefits of purchasing green building supplies, as well as the potential hazards associated with purchasing unsustainable products. Again, it is the facilities staff, such as painters, who may actually have the most to gain from purchasing sustainable products since it is they who are the most exposed to the risks of hazardous paint fumes, which may range from cancer, to liver, kidney and central nervous system damage.[224] Communicating both the risks and the benefits of purchasing green building supplies will help ensure that your jurisdiction's buyers take advantage of the sustainable product options available to them.

[224] US Environmental Protection Agency "Volatile Organic Compounds' Impact on Indoor Air Quality" 2016 **https://www.epa.gov/indoor-air-quality-iaq/volatile-organic-compounds-impact-indoor-air-quality**

Best Practice #10

Track and report results, including cost savings and sustainability benefits, from your municipality's green building procurement initiatives.

Tracking and reporting progress on the sustainability of your green building initiatives will help your Green Building Team build support across your municipality, and will increase buy-in from leaders, purchasers and maintenance and facility professionals.

In 2013, **King County, Washington** reported that its agencies undertook 280 green building projects using the King County Sustainable Infrastructure Scorecard. At the time, this represented 98 percent of all capital projects undertaken by the County and included 100 percent LED lighting in courtrooms. By tracking electricity for these LED courtrooms, King County was able to measure a reduced lighting demand of 35 percent. This level of detail in King County's reporting, which includes both tracking the products purchased and installed *and* the building electricity consumed, has enabled it to demonstrate the positive operational impact of purchasing green lighting. Similarly, the County tracked a 30 percent reduction of water use resulting from the installation of water-efficient fixtures and appliances. Measuring these successes makes it easy to demonstrate the benefits of buying greener building supplies.

The environmental and economic benefits of sustainable purchasing may not always be solely located within resource consumption. For example, an LED light bulb lasts 50 times longer than an incandescent light bulb and 8-10 times longer than a compact fluorescent light bulb.[225] That means that installing LED bulbs in place of incandescent bulbs will save maintenance crews the hours, costs and risks associated with manually replacing that same incandescent light bulb 50 times. Those maintenance costs add up fast and make an easy business case for lighting retrofits.

Alameda County's Indoor Lighting Retrofit Yields Cost Savings and Environmental Benefits
In 2009, Alameda County, California undertook a comprehensive indoor lighting retrofit that saved 6,000 maintenance hours through longer-lasting lamps, along with 3 million kwh and more than $350,000 in annual energy costs. [226] The retrofit also eliminated 350,000 mg of mercury by specifying low-mercury lamps in the contract. By tracking and reporting on the benefits of purchasing sustainable building supplies, Alameda County has been able to tout their success nationally, achieving not only numerous LEED certifications but a 2016 Outstanding Case Study Award for their Green Building Program from the Sustainable Purchasing Leadership Council (SPLC).[227] This award will add momentum to Alameda County's green building efforts, creating a virtuous cycle where reporting the results of green building initiatives makes it easier to advocate for sustainable specs as new contracts come up for bid. By making sure to track and report their successes, Alameda County lays strong groundwork for a culture of sustainable purchasing across their government facilities, enabling the jurisdiction to achieve continuous improvements in the social, environmental and economic benefits of the building supplies they purchase.

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[225] Bulbs.com "LED FAQ", 2016 **http://www.bulbs.com/learning/ledfaq.aspx**
[226] Alameda County "Lighting Retrofit" 2016 **https://www.acgov.org/sustain/what/energy/lighting.htm**
[227] Karen Cook "Alameda County's Green Building Program" 2016
https://www.acgov.org/sustain/documents/casestudy_2016splc-greenbuilding.pdf