

Local Government Guide to Sustainable Procurement: A Lifecycle Approach

January 2025

Introduction

You don't need to look far to see that climate change is having devastating impacts on our infrastructure, healthcare systems, economies, ways of life, and not to mention ecosystems. Local governments hold a significant amount of purchasing power and have the ability to influence markets and drive sustainable industry development at scale. In 2024 alone, the City of Nelson had a capital budget of \$11-million. Combined with Provincial and Federal investments, this provides a tremendous opportunity to prioritize low-emission, low-waste, and local products and services.

The combination of soaring inflation rates and consumer costs, and the costs of carbon emissions on our society estimated at \$270/ton, calls for a new way of considering 'fiscal responsibility' and the spending of public funds. It is imperative that we consider the lifecycle costs or 'total cost of ownership' for all purchases and assets. **The good news is, we can save money and support local economy while we do it!** A number have studies have found that the lifecycle carbon footprint of buildings can be reduced by 24-46% with less than a 1% increase in up-front costs, and can significantly reduce lifecycle costs of ownership by avoiding expensive retrofits and maintenance.

Nelson Next - Aspiration 7: 'Update City Procurement Policy with sustainability-focused guidelines that require the prioritization of products and vendors that are local, low-emission, and low/zero waste'.



How to Use This Guide

This Sustainable Procurement Guide outlines a range of options for local governments to improve their procurement processes. While there are certainly benefits and efficiency gains to a holistic approach, every local government has a unique situation, and opportunities and challenges will vary between communities.

Best practice recommendations are...

- Start with **Section I (Planning)** and choose the option that is most feasible for the city given resource constraints and priorities.
- If feasible, pursue **Section II (Policy)** and **Section III (Process)** concurrently, on parallel paths that ideally lead to a holistic framework aligned with the city's other policies.
- If pursuing **Section II (Policy)** and **Section III (Process)** concurrently is not feasible, then the recommendation is to either pursue incremental steps in Section III or use a single project as a case study.

The **flowchart** on the following page outlines these 3 Sections and how they interact.

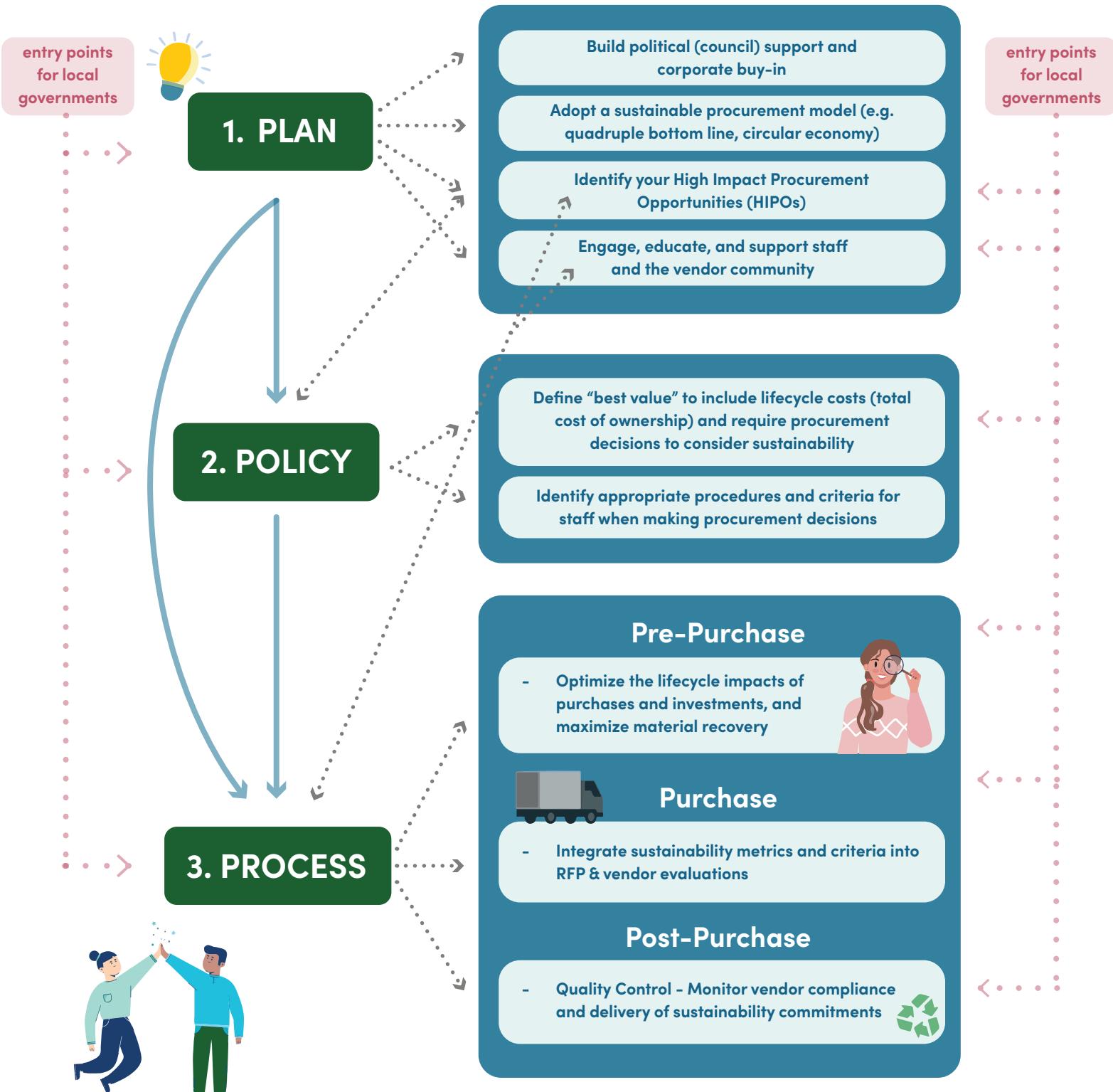
We would like to acknowledge our gratitude for the dedicated **research** that Christine Lee conducted to support this resource through her UBC Sustainability Scholar position.



Sustainable Procurement Flowchart

The 3 P's

The following flowchart provides a range of options and entry points for local governments to integrate sustainability and embodied carbon considerations into their purchasing decisions and processes. Click on any bubble to learn more about it!



Section 1: Getting Started Adopting a Sustainable Procurement Strategy

What is a Sustainable Procurement Strategy?

- A long-term vision for a City's Sustainable Procurement Program
- Requires Council/Board adoption and corporate management buy-in
- Best structured as a phased action plan for the implementation and management of sustainable procurement processes
- May identify or create a staff position dedicated to these efforts such as a Sustainability Manager or Sustainability Procurement Specialist (Richmond, Brampton, Vancouver, and Saanich have all done this)
- Identifies an overall sustainable procurement model

See it in Action



The City of Brampton, Ontario developed a **Sustainable Procurement Framework** for 2020–2025. This phased plan includes updating the purchasing bylaw, developing environmental standards for lifecycle impacts of purchases and environmental certifications for products, the creation of a Sustainable Procurement Office, and extensive staff and vendor education programs.

The Canadian Collaboration for Sustainable Procurement (CCSP) has a **Guide with a 10-step framework** that helps Local Governments start this process.

Benefits and Challenges for Adopting a Sustainable Procurement Strategy:

Benefits

Ensure top-down support for sustainable procurement

Can increase funding opportunities and uptake of policy/process changes

Aligns procurement policy with other city policy/strategy (Nelson Next)

Challenges

Requires upfront investment of personnel and time

Requires broad organizational support

Many local governments use a consultant for this stage

Sustainable Procurement Models

Model A: Circular Economy

Reusing, sharing, repairing, refurbishing, remanufacturing, and recycling minimizes waste and use of new resources. This model mimics a closed-loop system and has been widely used in Europe.



See it in Action

The City of Richmond adopted a goal of having a 100% circular economy by 2050 and hired a Circular Economy Program Manager to implement and oversee the program.

Model B: Four Pillars of Sustainable Procurement

This model is supported by the Canadian Collaboration for Sustainable Procurement (CCSP). Definitions for the four pillars can vary between municipalities but often include:



Environmental Pillar – GHG reductions, reduced waste outputs, consideration of full lifecycle impacts of products and services



Ethical Pillar – Supply chain accountability and transparency



Social Pillar – Support local economy, engage underemployed groups, hiring social enterprises and Indigenous businesses – sometimes this is identified as its own pillar



Economic Pillar – financial responsibility, realizing best value, evaluating total cost of ownership

See it in Action

The City of Charlottetown, PEI developed a [Strategy and Action Plan](#) for 2023-2028. The Plan builds out a program based on the Four Pillars of Sustainable Procurement that includes the:

- dedication of significant resources towards the program implementation
- regular staff training
- the identification of High Impact Procurement Opportunities (HIPOs)
- the implementation of a Procurement Bylaw.

See Appendix A for more on Sustainable Procurement Models

Key Action Steps

1

Identify High Impact Procurement Opportunities (HIPO's)

These are the high-impact and/or low-hanging fruit where sustainable considerations can be more easily integrated into procurement processes or could achieve significant results. Below are some common examples:

HIPO	Details
Construction Projects (as a category or single case study)	<ul style="list-style-type: none">• Tend to be high value/high climate impact• Many contractors in Nelson have some familiarity with embodied carbon• Builds on work/outreach done by the Low Carbon Homes Pilot & Embodied Carbon Advisory Group
Construction materials (concrete, steel, insulation)	<ul style="list-style-type: none">• Certain materials contribute large proportions of a building's embodied emissions and other impacts• Performance metrics can be established for these specific materials to limit their negative impacts• The BC Provincial Government has a <u>'wood first' initiative</u> for construction
Information technology	<ul style="list-style-type: none">• Large IT vendors are familiar with providing sustainability deliverables• Richmond has targeted their IT purchases as a HIPO
Fleet & Transit purchases	<ul style="list-style-type: none">• High capital cost and heavy use of fossil fuels• Saanich targeted fleet purchases as a HIPO
Climate/ sustainability purchases as pilots	<ul style="list-style-type: none">• Staff from Climate Sustainability teams can help drive the process• Products making sustainability claims may already have industry-standard measurement tools in place• Charlottetown used their e-bike program as a HIPO pilot
Small \$-value, repeat purchases (office and cleaning supplies, lights, food)	<ul style="list-style-type: none">• Sustainability considerations can be specific (i.e. 0% recycled content)• Small \$-value comparatively, but can be a simpler entry point• Nanaimo targeted their printing services as a HIPO

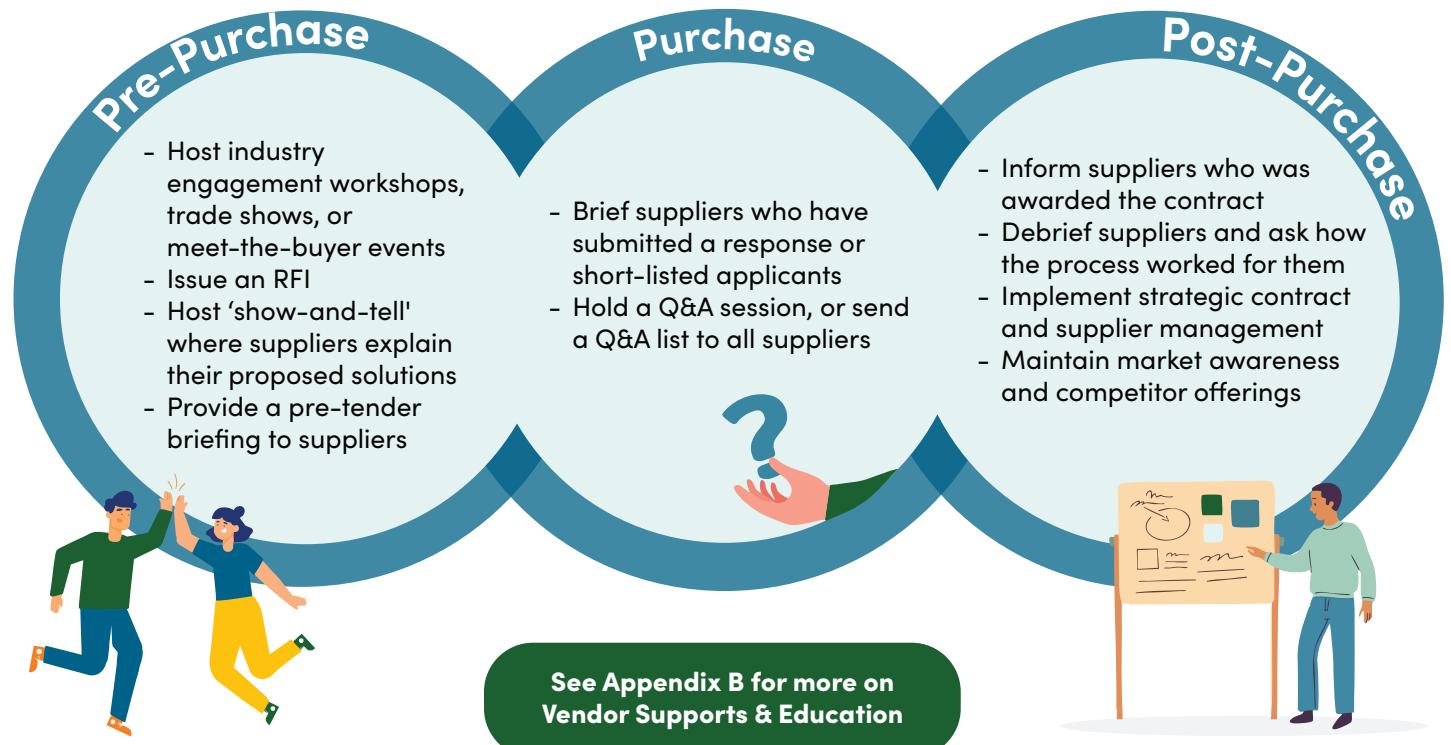
Education for Staff

Ongoing staff supports are critical for ensuring procurement policy and process adaptation are understood and can be implemented. Start by finding out what staff already know to determine what level of training and educational materials are required. There are a wide variety of resources and tools available to support staff. Some of these are free, and some are available through membership-based groups (like the BC Sustainable Procurement Initiative, Canadian Collaboration for Sustainable Procurement, and Procurement Community of Practice) or consulting agencies (like Reeve Consulting).

See Appendix B for more on staff supports and education

Education for Vendors

Outreach to the local vendor community is extremely important to both understand what is feasible for vendors of varying sizes, and to increase understanding of and capacity Sustainable Procurement criteria and performance metrics.



Section 2: Developing a Sustainable Procurement Policy

A City's procurement policy regulates the manner in which City purchases are made. As expenditures of public funds, municipal purchases must be made in an open, transparent, fair, and cost-effective manner. Purchasing can follow a number of different processes depending on what is being purchased, its cost, and other factors:

RFP (Request for Proposal)	RFQ (Request for Quotation)	RFI (Request for Information)	RFT (Request for Tender)
Requires a vendor to propose how to furnish a product or service for the City.	Formal quote process for providing a product or service to the City.	Preliminary process to screen the market for potential suppliers and their capabilities	Requires vendor to furnish a product or service for the City where the project specifications and results are known.

A Sustainable Procurement Policy:

- 1 defines 'best value' or 'maximum value' for purchases as including sustainability impacts rather than limiting it to lowest upfront costs.
- 2 identifies what procedures or criteria City staff will use to incorporate sustainability considerations into purchasing processes and decisions.



Process Adaptation Opportunity

The City of Nelson's Procurement Policy ensures 'maximum value' in acquiring goods and services. This can include costs related to acquisition, disposal, training, and maintenance, as well as product performance and environmental impact. The policy also enables the City to consider its commitment to the environment and energy savings. An overhaul of the City's Procurement Policy is expected soon, where these definitions will be solidified and expanded on.

See it in Action



City of Richmond – 'best value' includes circular economy outcomes that support innovation, long-term environmental quality, and business mobilizations and collaboration.

District of Squamish – 'best value' (Total Cost of Ownership) means the direct social, environmental, and financial costs and benefits of a product/service/construction during acquisition, use, and end-of-life phases.

City of Campbell River – 'best value' includes life cycle costs (acquisition, operation, maintenance, and disposal) and environmental considerations as opposed to lowest price

District of Summerland – Gives preference to products/services that are carbon neutral, have increased energy efficiency, and consider climate adaptation and resilience over time.

Section 3: Developing Sustainable Procurement Processes

Phase 1: Pre-Purchase Considerations

Before a purchase is made, there are several things to consider that can help minimize unnecessary purchases and optimize product use, lifetime, and material recovery.



Process Adaptation Opportunity

Many municipalities including the City of Nelson have a **Purchase Order (PO) Request Form** that is used to initiate purchases. This form can be modified to include sustainability considerations relevant to the purchase. These changes can be made as a standalone step or as part of a full overhaul of a **Procurement Policy**. For optimal impact, they should be accompanied with the support of a **Sustainable Procurement Strategy** and staff education program.



Sample Checklist for General Purchases

- Is there an alternative to buying something new? (lease, refurbish, reuse, maintain existing assets, reduce consumption)
- What are the environmental impacts of the product/service throughout all of its lifecycle phases? (e.g., carbon emissions, water consumption, use of toxic chemicals, etc.)
- Are there any third-party certifications for suppliers? (e.g., Certified Benefit Corporation, Social Purpose Business, Buy Social Canada, Certified Carbon Neutral)
- Are there any third-party certifications (ecolabels) for products?
- Can the goods or services be purchased locally to reduce transportation/energy costs and emissions?
- Are the materials recycled, biodegradable, and/or renewable, including packaging?
- Is there an opportunity to use cooperative purchasing to leverage purchasing power to embed sustainability requirements into the purchase?

See Appendix C about Purchasing Supports and Resources



Sample Checklist for Construction Projects

Can you:

- Reuse or retrofit an existing building?
- Design for disassembly & reuse?
- Select salvaged or refurbished materials?
- Reduce floor area?
- Reduce below-grade construction?
- Use less concrete and low-carbon concrete mixes?
- Select lighter materials & assemblies?
- Design structures for material efficiency?
- Minimize construction and demolition waste?
- Consider total lifecycle carbon emissions?
- Select carbon-storing structural (biogenic) materials?
- Select low-GWP refrigerants and minimize HVAC sizes?

Phase 2: Purchase Considerations

Option 1

Incorporating generalized sustainability & carbon reductions into the Request for Proposal (RFP) Process.

The benefit of this 'one-size fits all' option is that it is simple to implement because it can be used with any type of vendor and targets vendors' existing sustainability policies. However, it does not target purchase-specific environmental impacts like embodied carbon emissions.

Process Adaptation Opportunity

Sustainability Questionnaires can be used to request information about vendors' sustainability practices and policies in an RFP. These criteria can be assigned point values in the RFP evaluation process. The City of Nelson could:

- Add this questionnaire as a new element to the 'Response Content' section of its current RFP template, attaching the questionnaire and requiring it to be filled out as part of the proposal.
- Add sustainability criteria as a new element in the 'Evaluation Criteria' section of its current RFP template and indicate the points assigned to this criterion. (A BC Social Procurement Initiative (BCSPI) survey found that on average cities assigned social value criteria a weight of 10-15% of total points awarded)

See it in Action

The City of Winnipeg has an Environmental Procurement Questionnaire template with sample evaluation scoring guides.

The Comox Valley Regional District put out an RFP for a consulting firm to develop a GHG emission reduction strategy and awarded 10% for social criteria including:

- Existing sustainable practices (e.g., minimization of carbon emissions)
- Proposer's alignment with the District's strategic priorities and policy objectives

The City of Richmond put out an RFP for the management of an e-scooter share system and awarded 5% for circular economy and sustainability principles including the proposer's:

- Life-cycle program
- Waste collection and reduction strategies
- Energy management and conservation strategies

Option 2

Incorporating deliverables, performance metrics, and criteria, specific to the good/service being procured, into the RFx process.

There are many tools that calculate environmental impacts from product life cycles that can be used to incorporate sustainability-related deliverables into purchasing specifications. However, terminology can be confusing/inconsistently used.

Process Adaptation Opportunity



The City of Nelson is one of a few municipalities in BC that own and operate a utility company (Nelson Hydro). This provides an opportunity to explore what sustainable procurement can look like for hydroelectric purchases.

See Appendix C for resources relating to hydroelectric purchases

See glossary for definitions of eco-labels, EPDs, PCFs, LCAs, RFx process, material life cycles, etc.



Sample Checklist for Construction Projects

- Target specific materials for inclusion or exclusion (e.g. limit concrete use or require the use of a low-carbon concrete mix, choose natural products and avoid foam products, use performance-based specifications for strength and durability while noting that low-carbon options are preferred)
- Require a specified level of LEED (Leadership in Energy and Environmental Design) certification – or another green building certification – for new buildings
- Require vendor to disclose the embodied carbon of the project on a product or material level basis using any of the following tools:
 - Require the construction team to provide EPDs for materials purchased
 - Require the construction team to use material-level LCA embodied carbon tools to calculate carbon emissions for the project (e.g. Builders for Climate Action BEAM estimator)
- Incorporate the **'Standard on Embodied Carbon in Construction'** requirements issued by the Government of Canada
- For large building projects, require the vendor to provide a whole-building LCA to disclose the embodied carbon of the whole project

For construction-related tools, see Appendix C

See it in Action



The Sunshine Coast Regional District had 5% awarded to sustainability criteria in their RFP for landscaping services. Respondents were asked to: Identify the environmental cost of ownership, use of energy-efficient products, use minimal or environmentally friendly packaging materials, reduce toxins and ozone-depleting substances

Phase 3: Post-Purchase Considerations

Ensuring you get what you want and paid can be extremely difficult and requires holding vendors accountable for sustainability considerations throughout the life of a contract. This includes establishing clear monitoring and reporting requirements. These expectations must be:

- Explicit deliverables or contractors will not be obliged to provide them
- Included as mandatory language ('must') in vendor proposals
- Include specific delivery timelines



Process Adaptation Opportunity

The City of Nelson has a [Contractor Evaluation Checklist](#) and many other municipalities have a similar document. This can be modified to add a field regarding compliance with sustainability requirements. The City's website states that these evaluations are kept on file and used to influence the awarding of future contracts.



Sample Checklist for General Purchases

Consider contract clauses such as:

- Requiring regular product maintenance
- Requiring the refurbishment of older products
- Ensuring products have warranties and are manufactured responsibly
- Requiring the exploration of opportunities for reuse by other organizations at the end of a product's first life
- Ensuring proper recovery and recycling of products at the end of their life

See Appendix on contractor monitoring etc.



Sample Checklist for Construction Projects

- Requiring data collection during construction, including material quantities, suppliers, and EPDs, especially for concrete and other major material categories
- Prioritizing low-carbon materials for all future maintenance and repair
- Requiring disassembly and reuse/recycling instead of demolition
- Requiring on-going reporting/disclosure of annual carbon footprint of operations

For construction contracts using the Master Municipal Construction Documents (MMCD) or Canadian Construction Documents Committee (CCDC) templates, specific obligations may be referenced in the Supplementary General Conditions (SGC) section.

See it in Action



- Marin County has a [Low Carbon Concrete Contractor Compliance Form](#) that tracks concrete mix and quantity data to ensure compliance with contract specifications.
- The City of Vancouver has [requirements for salvaging wood and reusing and recycling other building materials](#) when deconstructing a house.
- The City of Kelowna has a [Contract for Parking Management Services](#) with a clause requiring annual reporting of any fossil fuel usage.

Glossary

Best Value: A model of procurement that takes into account factors other than just lowest upfront cost in order to balance multiple factors, including quality, risk, and other values, including sustainability considerations.

Circular Economy: An economic development model that “emphasizes reusing, sharing, repairing, refurbishing, remanufacturing, and recycling for a closed-loop system that minimizes waste.”

Eco-labels: Third-party certifications verifying that a product meets or exceeds certain environmental performance standards.

Embodied Carbon Emissions: Greenhouse gas emissions produced through the manufacture of building materials, construction, and disposal through the lifecycle of a building, as distinct from operational carbon emissions, or the emissions produced through energy use associated with a building, such as heating, cooling, lighting, and ventilation.

EPD (Environmental Product Declaration): A disclosure document that reports a product's environmental impacts (as calculated from an LCA) in order to understand the embodied carbon of materials.

EPR (Extended Producer Responsibility): The extension of a producer's responsibility for a product to the post-consumer state of a product's life cycle. The responsibility can be physical (e.g., take back used computers to ensure proper disposal) or financial (e.g., pay another company to accept used goods).

HIPO (High Impact Procurement Opportunity): Specific categories of goods or services, or individual projects, for sustainable procurement based on impact, risk, or strategic importance.

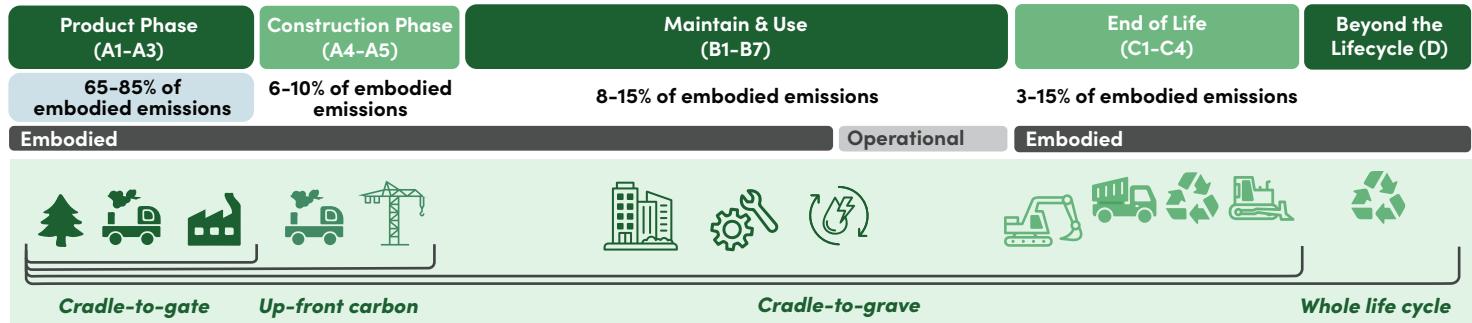
LCA (Life Cycle Assessment): Method of assessing the potential environmental impacts of a product or service through its entire life cycle, from the supply of raw materials and production, to use, disposal, or end of life waste management.

LCC (Life Cycle Costing): An assessment of all costs of a product over its life cycle, from acquisition to use, disposal, recycling, or end of life management. Can include costs related to environmental externalities to the extent that they can be determined.

LCI (Life Cycle Inventory): Data representing the inputs and outputs for a given product system incurred over its life cycle, and the basis for creating an LCA.

Glossary

Material/Product Cycle Phases



Product Carbon Footprint (PCF): An LCA that focuses on a single impact category, global warming potential, measuring the potential release of greenhouse gas (GHG) emissions over the product life cycle.

RFx: Request for any type of vendor information, inclusive of Request for Proposal (RFP), Request for Quotation (RFQ), Request for Information (RFI), and Request for Tender (RFT).

Sustainable Procurement: Also known as Social Procurement, refers to purchasing practices that embed sustainability considerations into the selection of goods and services in order to achieve environmental, social, and/or cultural goals.

TCO (Total Cost of Ownership): The total lifecycle costs of a product or asset including the purchase price, plus its associated operational, maintenance, and disposal or end-of-life costs.

Whole Building LCA (wbLCA): A method of compiling and analyzing all the inputs, outputs, and potential environmental impacts of all of an individual building's components over its lifetime.

Appendix A: Sustainable Procurement Models

Part 1: Circular Economy

National Zero Waste Council (Metro Vancouver) - [Circular Economy Resource Library](#)

Circular Innovation Council (membership-based group)

- [Circular Economy Basics](#)
- [Circular Procurement Implementation Guide](#)
- [Considerations for Developing a Municipal Circular Procurement Framework](#)

Mervyn Jones (circular economy/procurement expert) - [Circular Procurement Best Practice Report](#)

Circular & Fair Information and Communication Technologies Pact - [Webinar on CFIT Framework for ICT Procurement](#)

Part 2: 4 Pillars of Sustainable Procurement

Canadian Collaboration for Sustainable Procurement (CCSP) - [Sustainable Procurement Guide for Municipalities](#)

Appendix B: Education & Engagement

Part 1: Staff Supports & Education

BC Social Procurement Initiative (BCSPI) – Led by Buy Social Canada, paid membership includes access to RFx templates, sustainable purchasing guides, vendor outreach guides, and a training library. Free resources:

- [Free Guides & Training for Purchasers](#)
- [Resources, Tools & Case Studies](#)

Canadian Collaboration for Sustainable Procurement (CCSP) – Led by Reeve Consulting, membership includes access to webinars, working groups, guides, and RFx templates.

Free resources:

- [About CCSP](#)
- [Guides and Reports](#)

Carbon Leadership Forum (CLF)

- [CLF Embodied Carbon Policy Toolkit](#)
- [Implementing Buy Clean Policies](#)

Community Energy Association (CEA) – [Municipal Policies, Programs, & Incentives Guide](#)

Newfoundland & Labrador's Green Procurement Guide – [Green Procurement Guide](#)

Procurement Community of Practice – Free forum for local government, membership includes access to webinars, quarterly 'Buyer Flyer' newsletters, and training opportunities. To join contact PCOP@gov.bc.ca

Reeve Consulting – sustainable procurement consultant, leads the CCSP – [Website](#)

Part 2: Vendor Supports & Engagement

Buy Social Canada – [Free Resources for Suppliers](#)

Canadian Green Building Council (CAGBC) – [Zero Carbon Building Design Standard](#)

Carbon Leadership Forum – [Urban Embodied Carbon Checklist; Architect Toolkit](#)

Green Growth Working Group – [Webinars & Publications](#)

National Zero Waste Council – [Circular Economy Principles & Strategies](#)

Appendix C: Purchasing Supports & Resources

Part 1: Using Sustainability Criteria in RFx

BC Government's Guidelines for Environmentally Responsible Procurement

(For facilities, equipment, waste management, travel, training, supplies, etc.)

Ecolabels

- Ecolabel Index
- Newfoundland & Labrador - Green Procurement Guide (Ecolabels for products)
- Reeve Consulting Factsheets for Ecolabels
- Electronic Equipment Ecolabels (University of Saskatchewan)

Environmental Product Declarations (EPDs)

- EPD Guide (Ecochain)
- EPD Library (EPD International)

Life Cycle Assessments

- EcoChain - LCA Guide; Free Course; Mobius (Product Tool) Helix - (Portfolio Tool)
- Sphera - LCA Database
- Nexus - OpenLCA Database
- Ecoinvent - LCI Database
- Open IO Canada - LCI Database
- Product Carbon Footprint Guide - Department for Business Innovation & Skills

Sustainability Advantage - Business Cases, Templates, and Assessment Tools

Winnipeg City's - Environmental Procurement Questionnaire

Part 2: Construction Purchasing Resources

Environmental Product Declarations (EPDs)

- Regional Canadian Concrete EPDs
- North-America & Canada Concrete/Cement EPDs (in Appendix A)
- National Research Council - LCA2 EPD Library
- North American Material Baselines - Carbon Leadership Forum

Government of Canada's - Standard & Disclosure Template for Embodied Carbon

LEED – Green Building Design Standard - LEED tools (U.S. Green Building Council)

Life Cycle Assessments (LCAs)

- National Guidelines for Whole-Building Life Cycle Assessment - NRC
- Carbon Footprint Calculators Guide - Circular Ecology

Whole-Building LCA Tools

- BEAM Estimator Tool - Builders for Climate Action
- Material Carbon Emissions Estimator (MCE2) - NRC (uses HOT2000 model results)
- Athena - Impact Estimator for Buildings
- TallyLCA & EC3 - Building Transparency
- OneClickLCA

Appendix C: Purchasing Supports & Resources

Part 3: Hydroelectric Purchasing Resources

United States Environmental Protection Agency

- [Guide to Purchasing Green Power](#)
- [Renewable Energy Contract Development Best Practices](#)

American Cities Climate Challenge

- [Renewable Power RFP Template](#)
- [Renewable Power Tools & Resources](#)

Hydropower Sustainability Alliance

- [Hydropower Sustainability Guidelines](#)
- [Hydropower Sustainability Standards](#)

Part 4: Contract Monitoring Resources

Sustainability Advantage - [Sustainable Procurement Toolkit](#)