



Guide to Reducing Embodied Carbon Emissions in Municipal Procurement

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Disclaimer

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This project was conducted under the mentorship of City of Nelson staff. The opinions and recommendations in this report and any errors are those of the author and do not necessarily reflect the views of the City of Nelson or the University of British Columbia.

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Executive Summary

In recent years, Canadian governments at every level have been endeavoring to incorporate sustainability considerations, specifically the reduction of carbon emissions, into their public purchasing:

- At the **federal level**, the Government of Canada has begun compelling contractors to disclose their greenhouse gas emissions and set reduction targets, through initiatives such as the *Standard on the Disclosure of Greenhouse Gas Emissions and the Setting of Reduction Targets* and the *Standard on Embodied Carbon in Construction*.¹ Further, through its Greening Government Strategy, the Government of Canada aims to reduce greenhouse gas emissions within government operations and purchased assets.²
- At the **provincial level**, the Government of British Columbia issued its “Guidelines for Environmentally Responsible Procurement,”³ and its “Procurement Plan 2024” prioritizes “using procurement as a strategic lever for change” to align with other strategic initiatives like CleanBC Roadmap to 2030.⁴
- At the **municipal level**, a 2022 report produced by the Community Energy Association (CEA) found that local governments are best positioned to lead the battle against climate change and that reducing embodied carbon emissions requires coordination among design, procurement, and performance teams early in a project.⁵

Since 2020, the City of Nelson has been working to reduce the impact of **embodied carbon emissions** in its built environment. Nelson’s **Low Carbon Homes Pilot (LCHP)** has housed this work since 2021, with financial support from FortisBC. As of the date of this Guide, the LCHP is currently in Phase IV, which has the following as one of its main focuses: **embedding embodied carbon and related sustainability considerations into the City’s procurement policy and processes**.⁶

Embedding embodied carbon and related sustainability considerations into the City’s purchasing would enable it to:

¹ Treasury Board of Canada Secretariat News Release dated 28 February 2023.

² Treasury Board of Canada Secretariat, *Green Procurement: Buyers for Climate Action*.

³ Government of BC website, *Guidelines for Environmentally Responsible Procurement*.

⁴ Government of BC website, *BC Procurement Plan 2024*.

⁵ *A Local Government Guide: Policies, Programs, and Initiatives to Reduce Embodied Emissions* 28.

⁶ City of Nelson, *Low Carbon Building Materials*.

- Realize **cost savings** when considering the entire life-cycle of a purchase
- Buy goods and services with **reduced environmental impacts**
- Align its purchasing with forward-looking federal, provincial, and municipal practices
- Align its purchasing with Aspiration Seven as outlined in the **Nelson Next** climate plan, which envisions a city in which “all municipal operations are low carbon and resilient,” and in which City procurement policy features “sustainability-focused guidelines that require the prioritization of products and vendors that are local, low-emission, and low-zero waste”.⁷

This Guide presents the following best-practice recommendations for the City of Nelson to begin incorporating embodied carbon and related sustainability considerations into the City’s procurement policy and processes:

Getting Started:

- Start by adopting a long-term, phased strategy for sustainable procurement that is in alignment with other community strategies such as *Nelson Next*, the Official Community Plan, and Nelson’s Facilities Asset Management Strategy (FAMS).
- Alternatively, start by skipping straight to two of the essential elements of a strategy for sustainable procurement:
 - Identify categories of purchases, or a single purchase, that could serve as an entry point for incorporating sustainability considerations (known as High Impact Procurement Opportunities, or **HIPOs**)
 - Conduct educational outreach both towards staff (inward-facing) and towards the vendor community (outward-facing) around sustainable purchasing

The Purchasing Process: Once HIPOs have been identified, consider the following during the phases of the purchasing process:

- **Pre-Purchasing Phase:** Use the checklists provided in Section II of this Guide for construction projects and for other purchases to help minimize new purchases and materials while maximizing product use, lifetime, and recovered materials.
- **Purchasing Phase:**
 - Use the resources referenced in Section II of this Guide to incorporate and evaluate a proposer’s sustainability-related policies and practices (including carbon reduction strategies) into the RFP process.

⁷ *Nelson Next* 53.

- Use the resources and checklists referenced in Section II of this Guide for construction projects and for other purchases to incorporate deliverables, performance metrics, and criteria specific to the good or service into the purchasing process.
- Post-Purchasing Phase: Use the resources and checklists referenced in Section II of this Guide for construction projects and for other purchases to ensure that a vendor will be required to provide sustainability-related deliverables through the life of the contract.

Purchasing Policy: On a parallel path with incorporating sustainability considerations into the purchasing process, adopt a sustainable procurement policy that defines “best value” for purchases to include environmental impacts and identifies the procedures and criteria City staff will use in incorporating sustainability considerations into its purchasing.

This Guide is intended to be shared widely with other jurisdictions who are interested in incorporating sustainability considerations into their own procurement and who may be operating under different circumstances and resource constraints. Therefore, it is structured to provide a flexible range of options at each phase of the process, rather than being prescriptive.

Introduction

Embodied Carbon Emissions

Since 2020, the City of Nelson has been working to reduce the impact of **embodied carbon emissions** in its built environment. Embodied carbon refers to the greenhouse gas emissions produced through the manufacture of building materials, construction, and disposal through the lifecycle of a building, and is distinct from operational carbon emissions, or the emissions produced through energy use associated with a building, such as heating, cooling, lighting, and ventilation.

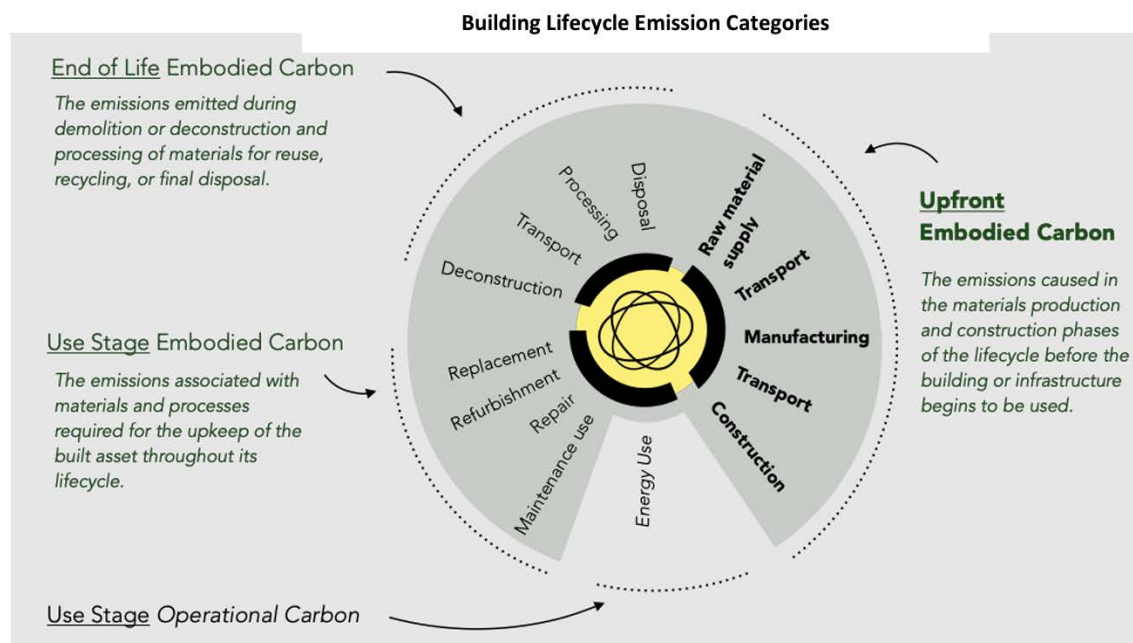


Figure 1 Lifecycle diagram showing how embodied (sections with green background) and operational carbon are most commonly conceptualized. This diagram has been adapted from one first published by the World Green Building Council in their 2019 "Bringing Embodied Carbon upfront" report (page 18).

Because embodied carbon accounts for approximately half of a building's total lifestyle emissions, failing to address it can hinder effects to reduce emissions overall.⁸

Although the concept of embodied carbon is often used in the context of buildings and construction, it also refers more broadly to the consumption of energy to "extract, refine,

⁸ Image and data from City of Nelson, *Embodied Carbon in Nelson: Current Work Being Done and Planned Initiatives to Come*.

process, transport, and fabricate a[ny] material or product...It is often measured from **cradle to (factory) gate, cradle to site (of use), or cradle to grave (end of life)**. The embodied carbon footprint is therefore the amount of carbon (CO₂ or CO₂e emission) to produce a material”.⁹

Nelson’s Low Carbon Homes Pilot

The **Low Carbon Homes Pilot (LCHP)** has housed the City of Nelson’s embodied carbon work since 2021, with continued financial support from FortisBC. Phases I - III of the LCHP focused on determining the embodied carbon emissions resulting from new construction in Nelson and Castlegar and building awareness about reducing embodied carbon. Phase IV of the LCHP began in late 2023 and has two main focuses, the first of which is: **embedding embodied carbon and related sustainability considerations into the City’s procurement policy and processes**.¹⁰

This Project addresses focus #1 by providing guidance to staff in incorporating embodied carbon and sustainability considerations into the City’s procurement policy and processes.

Sustainable Procurement

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.¹¹ In recent years, Canadian governments at the federal, provincial, and municipal levels have been prioritizing Sustainable Procurement.

Governmental bodies can apply environmental award criteria in its purchasing as long as:

- The criteria allow for an open and competitive process
- The evaluation and selection criteria are clearly outlined in any **Request for Proposal (RFP), Request for Quotation (RFQ), Request for Information (RFI), and Request for Tender (RFT)** (collectively, “**RFx**”)
- The award complies with applicable law and policy¹²

⁹ Circular Ecology, *Embodied Carbon - The ICE Database*.

¹⁰ City of Nelson, *Low Carbon Building Materials*.

¹¹ CCSP, *Sustainable Procurement Guide* 10.

¹² Newfoundland, *Green Procurement Guide* 3.

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.	A preliminary process to screen the market for potential suppliers and their capabilities, after which an RFP may be issued.	Requires a vendor to furnish a product or service for the City where the project specifications and result are known.

- For recommendations on how to incorporate and evaluate a proposer's sustainability-related policies and practices (including carbon reduction strategies) into the RFP process, see page 16.
- For recommendations on how to incorporate deliverables, performance metrics, and criteria **specific to the good or service being purchased** into the RFx process, see page 17.

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Sustainable Procurement strives to achieve **"best value"** for taxpayers' money by considering not only upfront costs, but also the social and environmental impacts through the **life cycle** of goods and services.

What is the Life-Cycle of a Product?

The life-cycle of a product refers to all the stages of a product's life from raw material extraction through materials processing, manufacturing, distribution, use, repair and maintenance, warranty time frames and ultimately, disposal.

By considering **life-cycle costs**, greater savings can be realized. For example, an energy-efficient appliance may have a higher up-front purchase price, but result in cost savings over time when energy savings are accounted for.¹⁴

Purpose of the Guide

This Guide is designed to support city staff who work in and with procurement by providing guidance and resources for incorporating sustainability considerations, including reducing embodied carbon emissions, into municipal procurement activity.

¹³ Image from Newfoundland, *Green Procurement Guide 3*.

¹⁴ Newfoundland, *Green Procurement Guide 2*.

Research Approach

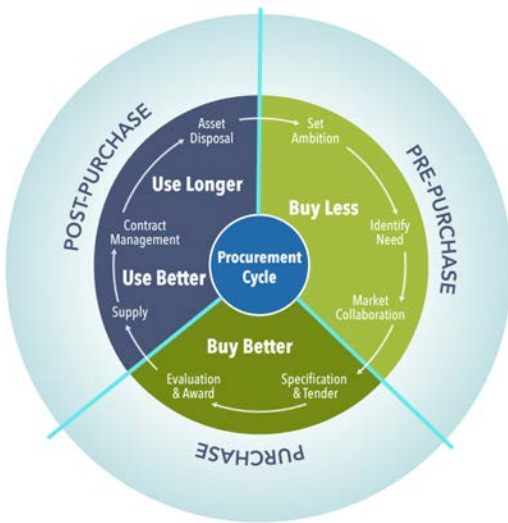
To build the Guide to Reducing Embodied Carbon Emissions in Municipal Procurement, the following steps were completed:

1. Reviewed documentation relating to City of Nelson's existing procurement policy and legal framework. A full list of City of Nelson documents reviewed is set forth in **Appendix A: City of Nelson Documents**.
2. Reviewed procurement policies and examples of sustainable purchases conducted by 24 jurisdictions in Canada and summarized those policies and examples in an Excel spreadsheet, including the type of policy, date of adoption, and relevant excerpts from the policy. The full Excel spreadsheet is set forth in **Appendix B: Summary Chart of Sustainable Procurement Policies + Examples**.
3. Conducted interviews with individuals about sustainable procurement policies and purchases, focusing on the interviewees' experiences, challenges, and learnings. A list of the interviews conducted is set forth in **Appendix C: Interviews**.
4. Investigated sustainable procurement resources such as purchasing groups, newsletters, consultants, educational resources, and tools. A full list of these resources, grouped by topic, is set forth in **Appendix D: Sustainable Procurement Resources**.
5. Created a glossary set forth in **Appendix E: Glossary of Key Terms**.
6. Drafted the Guide to Reducing Embodied Carbon Emissions in Municipal Procurement.

How to Use the Guide

This Guide provides options and examples to assist City staff in incorporating sustainability considerations, including the reduction of embodied carbon emissions, into procurement policy and processes.¹⁵

¹⁵ Image below from Circular Innovation Council, *Strategies for Circular Criteria 7*.



Thinking about procurement in **three phases (pre-purchase, purchase, and post-purchase)** helps to identify opportunities for including sustainability criteria throughout the procurement process.

This Guide is structured in three sections as follows:

Section I: Getting Started	Section II: The Procurement Process	Section III: Procurement Policy
➤ <u>Option 1</u>: Adopting a Strategy for Sustainable Procurement ➤ <u>Option 2</u>: HIPOs and Educational Outreach	➤ <u>Phase One</u>: Pre-Purchase Considerations ➤ <u>Phase Two</u>: Purchase Considerations ➤ <u>Phase Three</u>: Post-Purchase Considerations	➤ Adopting a Sustainable Procurement Policy

Although this Guide was created for the City of Nelson, the intent is that it can be shared widely with any other jurisdictions who are interested in further exploring sustainable procurement options of their own.

Best practice recommendations are:

- Start with Section I and choose the Section I option that is most feasible for the City given resource constraints and priorities.
- If feasible, pursue Section II (Process) and Section III (Policy) concurrently, on parallel paths that ideally lead to a holistic framework aligned with the City's other policies.

- If pursuing Section II (Process) and Section III (Policy) concurrently is not feasible, then the recommendation is to either pursue incremental steps in Section II, or use a single project as a case study.
- The intent is for this Guide to provide a flexible range of options at each phase of the process that can be pursued *à la carte*. It does not propose a strict requirement to follow steps sequentially. Where a range of options is presented, they are ordered from simpler to more complex.

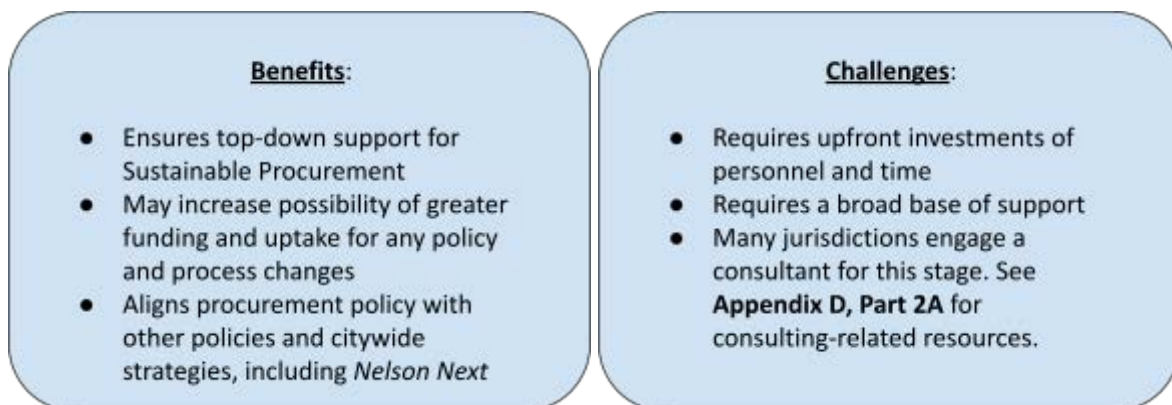
SECTION I: GETTING STARTED

Option 1 - Adopting a Strategy for Sustainable Procurement

Question: What is a Strategy for Sustainable Procurement?

Answer:

- A long-term, phased plan, approved by City Council, that outlines the City's vision for a Sustainable Procurement program and provides a course of action and identifies how it will be implemented and managed.
- The plan may identify or create a staff position specifically dedicated to these efforts, such as a sustainability manager or a sustainable procurement specialist (as has been done in Richmond, Brampton, Vancouver, and Saanich).
- It identifies an overall Sustainable Procurement model, such as the **Circular Economy** or the **Four Pillars of Sustainable Procurement**. See **Appendix D, Part 1** for details and resources on Sustainable Procurement models.



Examples: Strategies for Sustainable Procurement

- **City of Charlottetown, PEI Strategy and Action Plan for 2023-2028:**¹⁶

Goal 1: Develop a Sustainable Procurement Program

→ Build a program based on the Four Pillars of Sustainable Procurement

→ Conduct regular training and communications to build staff capacity

→ Secure sufficient resourcing to create a high-impact program

Goal 2: Incorporate sustainability into procurement decision-making

→ Incorporate sustainability into pre-identified High Impact Procurement Opportunities

→ Facilitate approval and implementation of Charlottetown's procurement bylaw

Goal 3: Measure and report on program outcomes

¹⁶ *Charlottetown Sustainable Procurement Strategy and Action Plan.*

- **City of Brampton, ON Sustainable Procurement Framework for 2020-2025:**¹⁷
 - Short-term plan (1-2 years): Update the purchasing bylaw
 - Medium-term plan (2-3 years): Develop environmental standards for vendors that will consider the life-cycle environmental impacts of purchases, align with the city's overall environmental master plan, and define a role for recognized environmental certifications of products
 - Long term plan (3-5 years): Create a Sustainable Procurement Office
 - Throughout: Staff education on sustainable procurement implementation, communication to vendors on same
- See **Appendix B** for more examples of Strategies for Sustainable Procurement adopted by other cities, including Victoria and Richmond

Option 2 - HIPOs and Educational Outreach

If adopting a multi-year, phased Strategy for Sustainable Procurement is not feasible given resource constraints, the City may wish to use as a starting point two of the early, essential steps in creating a Strategy:

1. **Identifying HIPOs**
2. **Educational Outreach**

Question 1: What is a HIPO?

Answer 1: **High Impact Procurement Opportunities (HIPOs)** are categories or individual projects that can serve as entry points to implement sustainable procurement based on impact, risk, or strategic importance

Potential HIPOs for the City of Nelson

HIPO	Rationale	Examples
Construction as a category, or a single construction project to serve as a pilot (e.g., construction of a new fire hall, or new paving contract)	➤ Tend to be high value / high climate impact ➤ Contractors already have familiarity with embodied carbon concepts ➤ Builds on work / outreach done by LCHP and the Embodied Carbon Advisory Group	● District of Squamish construction of 2 fire halls ● District of Saanich construction of fire hall ● Charlottetown, PEI construction of City works building

¹⁷ City of Brampton, *Sustainable Procurement Strategy*.

HIPO	Rationale	Examples
		• Brampton, ON net zero retrofit of sportsplex
Information Technology	Interviews indicated that large IT vendors are familiar with providing sustainability-related deliverables	City of Richmond
Fleet, Transit purchases	High impact categories with heavy fossil fuel use	District of Saanich
Specific climate/sustainability-related purchase as a pilot	➤ If someone from the Climate + Energy team is involved, they can help drive the process ➤ Products making sustainability claims may already have industry-standard measurement tools in place	City of Charlottetown - ebikes
“Low-hanging fruit” categories	➤ Purchases such as cleaning supplies or paper where the sustainability criteria can be narrow and specific (e.g. % of recycled content) ➤ Small dollar value relative to construction, but can be a simpler entry point	City of Nanaimo - Print Services

See **Appendix B** for examples of HIPOs in other jurisdictions.

Question 2: What is meant by educational outreach?

Answer 2: Ongoing efforts throughout the course of any process or policy changes to engage in

- **Outreach to empower staff** to understand and execute Sustainable Procurement strategies
- **Outreach to vendors** to understand the level of education around sustainability concerns, performance metrics for the industry, what is feasible for vendors of varying sizes, and to increase understanding of Sustainable Procurement criteria

Checklist: Educational Outreach to Staff

- ☐ Start by finding out what people know in order to determine the level of training and educational materials needed.
- ☐ See **Appendix D, Part 2A** for a list of Sustainable Procurement educational and training tools geared towards staff.

Checklist: Educational Outreach to Vendors

- ☐ Strategies for educational outreach to vendors during the three phases of procurement include:¹⁸

Pre-purchase	Purchase	Post-purchase
• Attend/host trade shows • Host a meet-the-buyer event • Issue a Request for Information • Host a “show and tell” to allow suppliers to explain their proposed solutions • Meet with industry bodies • Meet with a group of key suppliers or a range of suppliers • Sound out the market • Provide a pre-tender briefing to suppliers • Host industry or market engagement workshops	• Brief suppliers who have submitted a response • Brief short-listed suppliers • Hold a question-and-answer session, or send a list of all questions and their answers to all suppliers	• Let suppliers know who has been successful, including contract awards • Debrief suppliers and ask how the process worked for them • Contract and supplier management • Strategic supplier management • Maintain market awareness and competitor offerings

Source: SPP Regions Market Engagement Best Practice Report

- ☐ See **Appendix D, Part 2B** for a list of Sustainable Procurement educational and training tools geared towards vendors.
- ☐ Ensure all vendor engagements are open equally to all, fair, and transparent.

¹⁸ Image below from Circular Innovation Council, *Strategies for Circular Criteria 9*.

SECTION II: THE PROCUREMENT PROCESS

Phase One: Pre-Purchase Considerations

Pre-purchase considerations are targeted at minimizing new purchases and materials while maximizing product use, lifetime, and recovered materials.

Checklist: Pre-Purchase Considerations¹⁹

- ☐ Is there an alternative to buying something new?

- | | |
|---|---|
| ☐ Leasing instead of buying? | ☐ Way to reduce consumption of the good or service? |
| ☐ Use existing resources? | ☐ If replacing an existing product, any newer versions with greater sustainability benefits? |
| ☐ Used or refurbished resources? | |
| ☐ Possible to expand lifespan of current assets? | |

- ☐ What are the most likely environmental impacts of the product or service, so that potential environmental issues can be reduced?

- | | |
|---|--|
| ☐ Consider impacts related to sourcing, manufacture, packaging, operations, repair, and disposal | ☐ Use of water, harmful emissions, and toxic chemicals? |
| ☐ Can the product be reused/recycled at end of useful life? | ☐ Use of non-renewable resources and origin of those resources? |

- ☐ Are there any third-party certifications for suppliers, such as Certified Benefit Corporation, Social Purpose Business, Buy Social Canada, or Certified Carbon Neutral?
- ☐ Are there any third-party certifications for products? See **Appendix D, Part 5** for common third-party certified eco-labels.
- ☐ Can the goods or services be purchased locally to reduce transportation/energy costs?
- ☐ Are the materials recycled/biodegradable/renewable, including packaging?

¹⁹ Checklist information from Circular Innovation Council, *Strategies for Circular Criteria Appendix; Charlottetown Sustainability Tip Sheets for Low Value Purchases; Charlottetown Sustainability Issues Prioritization (SIP) Checklist*.

- ☐ Is there an opportunity to do a cooperative purchase to leverage purchasing power to embed sustainability requirements into the purchase? See **Appendix D, Part 2A** for possible cooperative purchasing opportunities.
- ☐ For **construction projects**:²⁰

☐ Reuse/retrofit existing buildings	☐ Select carbon-storing structural, envelope, and finish materials
☐ Design for disassembly and reuse	☐ Select lower-carbon refrigerants
☐ Select salvaged or refurbished materials	☐ Eliminate HFC-containing insulation and select lower-carbon insulation
☐ Reduce (new) floor area	☐ Integrate carbon intensity limits into specifications
☐ Reduce below-grade construction	☐ Use performance-based concrete specifications
☐ Select lighter materials and assemblies	☐ Optimize concrete mix design
☐ Design structure for material efficiency	☐ Source from lower-carbon facilities and products
☐ Choose finishes carefully	☐ Source climate-smart wood
☐ Minimize construction and demolition waste (waste prevention)	☐ Integrate carbon into the bid process
☐ Consider total carbon when selecting envelope systems	

Process-based insertion point

- The City of Nelson's **PO Request form**, used to initiate purchases, could be modified to add a field for sustainability considerations relevant to the purchase. This would ensure that sustainability considerations are baked into the procurement process.
- Any change to the form should be accompanied by the strategy and educational outreach processes described above for best impact.
- In a separate process, the City's procurement policy and templates are expected to be overhauled in the near future. At that time, sustainability considerations can be incorporated into any equivalents to the PO Request form.

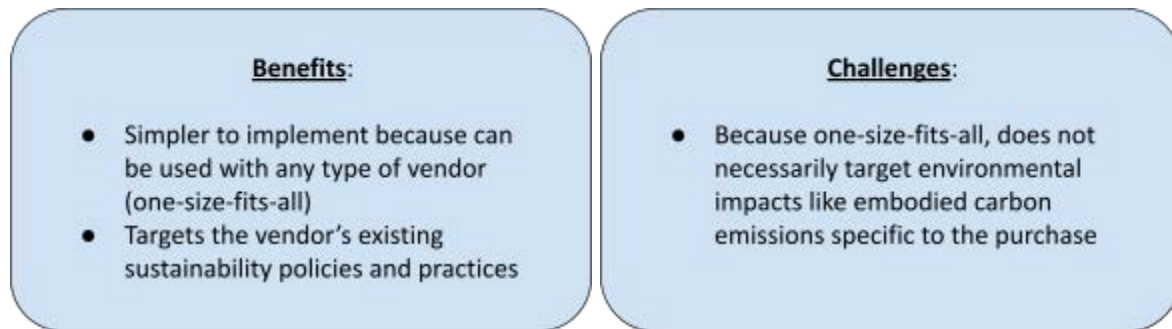
²⁰ Checklist from Carbon Leadership Forum, *Urban Embodied Carbon Reduction Checklist*.

Phase Two: Purchase Considerations

Question 1: How can the City incorporate and evaluate a proposer’s sustainability-related **policies and practices** (including carbon reduction strategies) into the RFP process?

Answer 1:

- The City can request information about the vendor’s sustainability practices and policies in a **sustainability questionnaire** and assign a point value to that criteria in its RFP.
- A BCSPi survey found that cities assigned social value criteria between 5 - 20% of total points awarded, with an average of 10 - 15%.²¹
- For a list of resources, including the Environmental Procurement Questionnaire used by the City of Winnipeg and sample evaluation scoring guides, see **Appendix D, Part 3**.



Examples: Incorporating Sustainability Policies and Practices into an RFP

- **Comox Valley Regional District:** RFP for a consulting firm to develop a GHG emission reduction strategy awarded 10% for social criteria, including:
 - existing sustainable practices, including the minimization of carbon emissions
 - proposer’s alignment with the District’s strategic priorities and policy objectives²²
- **City of Richmond:** RFP for management of an e-scooter share system 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.²³

²¹ BCSPi, *Annual Impact Report 2022-2023* 19.

²² BCSPi, *Annual Impact Report 2022-2023* 21.

²³ Russell, “Circular Procurement Policy Implementation and Progress Update” Attachment 2.

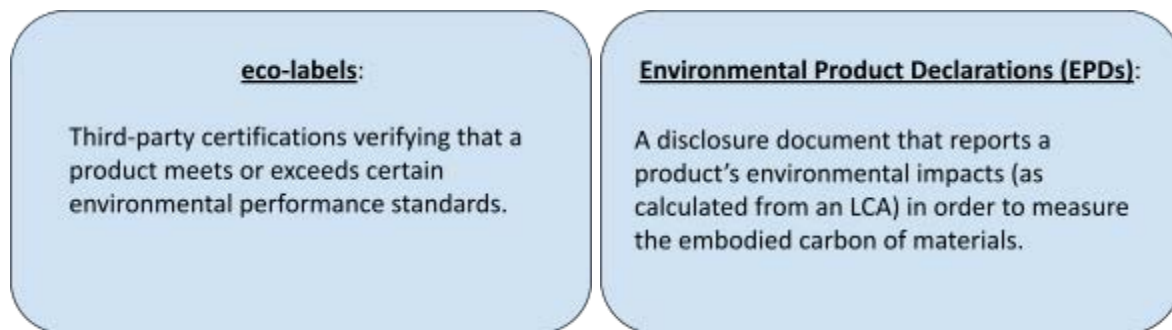
- See **Appendix B** for more examples of RFPs that incorporated sustainability criteria through the use of sustainability questionnaires

Process-based insertion point

- The City of Nelson could add a sustainability questionnaire as a new element in the **“Response Content”** section of its current RFP template and include the questionnaire as an attachment that needs to be filled out and returned as part of the proposal.
- The City of Nelson could add sustainability criteria as a new element in the **“Evaluation Criteria”** section of its current RFP template and indicate the points assigned to that criteria. Other cities awarded an average of 10 - 15% towards sustainability criteria.²⁴
- In a separate process, the City’s procurement policy and templates are expected to be overhauled in the near future. At that time, the equivalents to the “Response Content” and “Evaluation Criteria” sections of the RFP can incorporate the sustainability questionnaire and evaluation criteria.

Question 2: How can the City incorporate deliverables, performance metrics, and criteria **specific to the good or service being purchased** into the RFx process?

Answer 2: Many tools exist that calculate environmental impacts generated through the life cycle of a product, and these tools may be used to incorporate sustainability-related deliverables into specifications. However, the terminology can be confusing and used inconsistently, so it is important to **start with a few basic definitions**:²⁵



²⁴ BSCPI, *Annual Impact Report 2022-2023* 19.

²⁵ Definitions for **eco-label**: Charlottetown Sustainability Tip Sheet #7 for Low-Value Purchases; **EPD** and **LCA**: Zizzo, “Strategies for Low Carbon Concrete” 14; **PCF**: Dell Technologies, “Understanding Life Cycle Assessments (LCAs) 2; **wbLCA**: Bowick, *National Guidelines for wbLCA* xv.

Life Cycle Assessment (LCA):

A method of measuring the environmental impacts of a product or service over all phases of its life cycle, including embodied carbon.

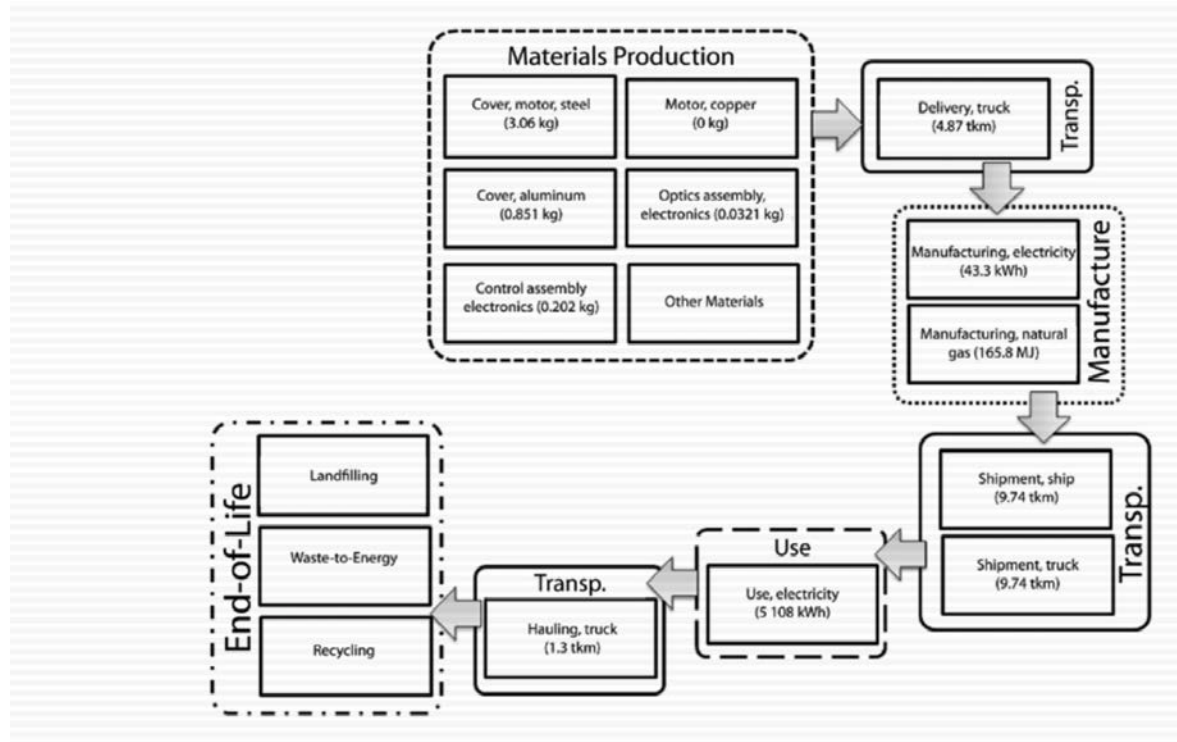
Product Carbon Footprint (PCF):

A method of measuring a single impact category, global warming potential, for a product, by measuring the potential release of greenhouse gas (GHG) emissions over the product life cycle.

Whole-building Life Cycle Assessment (wbLCA):

A method of analyzing the potential environmental impacts of all of an individual building's components over its lifetime.

Example of criteria to be examined in an LCA for a hand dryer:²⁶



²⁶ Image below from NRT EE, *Canada's Opportunity* 124.

Checklist: Options for Incorporating Sustainability Deliverables into Construction Projects

- ☐ Target **specific materials** for inclusion or exclusion. For example:
 - ☐ Limit concrete use, or require the use of 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. For details and LEED-specific tools, see **Appendix D, Part 4**.
- ☐ Require the 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. For a list of existing EPDs for construction materials, see **Appendix D, Part 4**.
 - ☐ Require the construction team to use **material-level LCA embodied carbon calculator tools** to calculate carbon emissions for the project, such as the **Builders for Climate Action BEAM estimator**. For a list of such tools and related resources, see **Appendix D, Part 4**.
- ☐ Incorporate the **“Standard on Embodied Carbon in Construction” requirements** issued by the Government of Canada. For details, see **Appendix D, Part 4**.
- ☐ For large building projects, require the vendor to provide a **whole Building LCA (wbLCA)** to disclose the embodied carbon of the whole project. For a list of wbLCA tools and resources, see **Appendix D, Part 4**.

Checklist: Options for Incorporating Sustainability Deliverables into Other Purchases

- ☐ Target **specific materials** for inclusion or exclusion.
- ☐ For resources relating to hydroelectric purchases, see **Appendix D, Part 5**.
- ☐ Require or prefer relevant **eco-labels** to provide third-party assurances the product is more environmentally responsible. For a list of commonly used ecolabels and ecolabel-related resources, see **Appendix D, Part 5**.
- ☐ Require an **LCA** for products, which requires the vendor to complete the following steps:²⁷
 - ☐ Step 1 – Define life cycle stages of the product based on one of the following:
 - ☐ **Cradle-to-grave**: Covers sourcing of raw materials to disposal of product

²⁷ Information gathered from Ecochain, *LCA Beginner Course*.

- ☐ **Cradle-to-gate:** Covers sourcing of raw materials until the product leaves the factory gate
- ☐ **Cradle-to-cradle:** Covers sourcing of raw materials to recycling/reusing, aka closed-loop recycling. For a list of resources describing LCA-related concepts, see **Appendix D, Part 5**.
- ☐ Step 2 – Collect **Life Cycle Inventory (LCI)** data based on one of the following:
 - ☐ Primary data specific to the product (collected by an expert)
 - ☐ Data from LCI databases that represent average products from certain geographical markets. For a list of LCI databases, see **Appendix D, Part 5**
- ☐ Step 3 – Use LCA software to translate the LCI data into impact category results and reveal the environmental footprint of the product. For a list of LCA software tools, see **Appendix D, Part 5**.
- ☐ Step 4 – Interpret the results of the LCA. LCAs can be verified by a third-party certified verifier, who will:²⁸
 - ☐ Confirm compliance with international standards regulating LCAs (**ISO 14040 and ISO14044**)
 - ☐ Confirm data were used appropriately
- ☐ LCA results for products can be reported in the form of a **PCF** or **EPD**. For a list of PCF- and EPD-related resources, see **Appendix D, Part 5**.

Examples: Incorporating Sustainability Deliverables into a Purchase

- **Sunshine Coast Regional District:** RFP for landscaping services awarded 5% for sustainability criteria. Respondents were asked to:
 - identify the environmental cost of ownership
 - use energy-efficient products
 - use minimal or environmentally friendly packing materials
 - reduce toxins and ozone-depleting substances²⁹
- **City of Kelowna:** RFP for Parking Management Services awarded 10% for sustainability criteria, including:
 - the requirement to use alternative-fuel and zero-emissions vehicles
 - the installation of EV charging stations to be used by the City's own EV fleet³⁰

²⁸ Ecochain, *How to Verify Your LCA Results*.

²⁹ BCSP, *Changing the Procurement Landscape: Sunshine Coast Regional District 4*.

³⁰ CCSP, *2023 Annual Report 28*.

- See **Appendix B** for more examples of RFPs that incorporated sustainability deliverables.

Phase Three: Post-Purchase Considerations

Post-purchase considerations focus on ensuring that sustainability-related contract requirements are followed throughout the life of the contract, including monitoring and reporting requirements. Interviews uniformly indicated that this phase is the most difficult and slowest to implement.

Question: How can the City ensure that a vendor will be required to provide sustainability-related **deliverables throughout the life of the contract**?

Answer:

- Any ongoing deliverables or requirements must be **captured in the contract**, or else the vendor will not be under any obligation to provide them.
- When a vendor's Proposal forms the Scope of Work for a contract, the language in the Proposal around sustainability-related deliverables needs to be mandatory ("**must**" language) and to specify any required deliverables and the timeframes for delivery.

Checklist: Options for Incorporating Sustainability Deliverables into Construction Projects³¹

- ☐ Consider contract clauses such as:
 - ☐ requiring data collection during construction, including material quantities and suppliers for concrete
 - ☐ prioritizing low-carbon materials for all future maintenance, repair, and refurbishment activities
 - ☐ requiring disassembly and reuse / recycling instead of demolition as appropriate.
 - ☐ requiring ongoing reporting / disclosure of annual carbon footprint of operations.
- ☐ For construction contracts in which the **Master Municipal Construction Documents (MMCD)** or **Canadian Construction Documents Committee (CCDC)** templates are used, any specific obligations may be referenced in the **Supplementary General Conditions (SGC)** section.
- ☐ For a sample Low-Carbon Concrete Compliance Form that could be required of the construction team, see **Appendix D, Part 6**.

Checklist: Options for Incorporating Sustainability Deliverables into Other Contracts

- ☐ Consider contract clauses such as:
 - ☐ requiring regular product maintenance to reduce downtime and extend product

³¹ Information gathered from Zizzo, "Strategies for Low Carbon Concrete" 24, 32.

- life
- ☐ requiring the refurbishment of older products to bring them to current use standards and extend their life span
- ☐ 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 if it is still in working condition
- ☐ ensuring proper recovery and recycling of products at the end of their life, allowing component parts or materials to be returned to the economy

Examples: Incorporating Sustainability Deliverables in a Contract

- **City of Kelowna:** Contract for Parking Management Services included a clause stating that “if any fossil fuels are used in the performance of the services of the contract, the usage and type of fuel needs to be reported to the City annually.”³²

Process-based insertion point

- The City of Nelson’s **Contractor Evaluation Checklist**³³ could be modified by adding a field such as “Compliance with sustainability requirements.” The City’s website states that “these evaluations will be kept on file and used as input for future awards.”³⁴ The current form does not specifically address sustainability requirements.
- When any purchasing policies and forms are overhauled in the future, compliance with sustainability requirements should be considered in any future contractor compliance checklist.

³² CCSP, 2023 Annual Report 28.

³³ [https://www.nelson.ca/DocumentCenter/View/367/Contractor-Evaluation-PDF?bidId=.](https://www.nelson.ca/DocumentCenter/View/367/Contractor-Evaluation-PDF?bidId=)

³⁴ <https://www.nelson.ca/217/Purchasing>.

SECTION III: ADOPTING A SUSTAINABLE PROCUREMENT POLICY

Question: What is a sustainable procurement policy?

Answer:

- A city's procurement policy, approved by its City Council, regulates the manner in which City purchases must be made. Municipal purchases, as expenditures of public funds, must be made in an open, transparent, fair, and cost-effective manner.
- A sustainable procurement policy addresses two areas:
 - Defines **best, or maximum, value** for purchases to include sustainability impacts rather than limiting it to lowest upfront costs
 - Identifies what **procedures or criteria** City staff will use in incorporating sustainability considerations into its purchasing

Examples: Sustainable Procurement Policies

- **City of Richmond:**
 - "The City will select suppliers based on **best value**, including, but not limited to, the economic attributes of the supplier's products and services, and where practical, circular economy outcomes that support innovation, long-term environmental quality, and business mobilization and collaboration."³⁵
- **District of Squamish:**
 - Out of the jurisdictions surveyed, only the District of Squamish's policy specifically called out embodied carbon.
 - **Best Value** means "the optimal combination of compliant responses to the District's terms and conditions and contract documents providing the District with the best value in Total Cost of Ownership."³⁶ **Total Cost of Ownership** means "the direct social, environmental and financial costs and benefits to the District of products, services and construction during their acquisition, use and end of life phases."³⁷
 - States that Procurement will work with Suppliers on reducing GHG emissions and "encourage (or require) the use of materials and products that have **less embodied carbon**."³⁸
- **City of Campbell River:**
 - **Best Overall Value** includes "all identifiable **life cycle costs** including disposal and environmental considerations, when purchasing goods, services, or construction

³⁵ City of Richmond Procurement Policy, Section 11.4.

³⁶ District of Squamish Procurement Policy, Section 2.3.

³⁷ District of Squamish Procurement Policy, Section 2.39.

³⁸ District of Squamish Procurement Policy, Section 3.

as opposed to simply considering the lowest price.”³⁹

- “Where practical, purchasing decisions are to consider the life cycle costs of the acquisition rather than just the initial purchase price. Life cycle costs include acquisition, operational, maintenance, and disposition costs.”⁴⁰

➤ **District of Summerland:**

- Gives preference “when feasible to Goods and Services that represent a non-carbon alternative, are carbon neutral or that minimize greenhouse gas emissions and thereby contribute to reducing the carbon footprint of the District.”
- Gives preference to “purchasing products with increased energy and resource efficiency wherever possible, such as equipment that complies with Energy Star or Natural Resources Canada Office of Energy Efficiency guidelines and recommendations.”
- Provides preference to “feasible Goods and Services that consider climate adaptation and resilience over time,” “reusable, remanufactured, recycled, or Zero Waste products, when possible,” and “minimal and recyclable packaging.”⁴¹

- For a summary of the sustainable procurement policies in the other jurisdictions surveyed, see **Appendix B**.

Policy-based insertion point

- The City of Nelson’s procurement policy as of August 2024 states that the City will ensure that “**maximum value** is obtained during the acquisition of goods and services, including, where appropriate, the total cost of the product purchased. Total costs may include but not be limited to acquisition cost, disposal cost, residual value, training cost, maintenance cost, product performance and **environmental impact**.”⁴² The policy also enables the City to, in its procurement, “tak[e] into account wherever practical, the **commitment to the environment and energy savings**.”⁴³
- In a separate process, the City’s procurement policy is expected to be overhauled in the near future. This future update would present a good opportunity to incorporate new definitions of “**best value**” along the lines described above.
- The updated policy could also include a statement about embodied carbon similar to the District of Squamish’s policy and state its alignment with any strategic plan for

³⁹ City of Campbell River Purchasing Policy, Section 1.1.

⁴⁰ City of Campbell River Purchasing Policy, Section 4.8.

⁴¹ District of Summerland Policy No. 200.6.

⁴² City of Nelson Policy No. 1200.00.010, Guiding Principle 3.

⁴³ City of Nelson Policy No. 1200.00.010, Guiding Principle 4.

sustainable procurement (if adopted), *Nelson Next*'s aspiration for all municipal operations to be low carbon and resilient, and the Official Community Plan.

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Appendix A: City of Nelson Documents

- *Building Better in the Kootenays: Low Carbon Building Assemblies Workshop* brief
- CCDC (Canadian Construction Documents Committee) template
- City of Nelson Contractor Evaluation Checklist
- City of Nelson *Facilities Asset Management Strategy* dated March 2024
- City of Nelson Financial Management Policy No. 1200.00.010, May, 2015
- City of Nelson Official Community Plan, Bylaw No. 3247, 2013, 9 January, 2024
- City of Nelson PO Request form
- City of Nelson Standard Terms and Conditions for Purchase Orders
- *Community Champion: Rokform Solution's Low Carbon Concrete Policy*, 29 February, 2024.
- MMCD (Master Municipal Construction Documents) template
- *Nelson Next: A Bold and Agile Climate Plan for a Healthier and Safer City*
- “Targeting Unseen Carbon Emissions in Nelson BC: The City of Nelson Low Carbon Homes Pilot” draft report, May 2024.
- The following sample purchase documents:
 - City of Nelson RFP 2021-P-10 for Pre-treatment Appliances for Residential Food Waste
 - City of Nelson RFP 2019-P-07 for Climate Change Workshop Design and Facilitation Services
 - Master Municipal Construction Documents 2019 Edition for Mountain Station Finished Water Storage 2024-T-04
 - City of Nelson Source Control Building 202-T-11 CCDC 2 (2008) Stipulated Price Contract

Appendix B: Summary Chart of Sustainable Procurement Policies + Examples

See attached.

APPENDIX B

SUMMARY OF SUSTAINABLE PROCUREMENT POLICIES + EXAMPLES

	Entity	Est Pop Size (2021 Census)	Policy Type	Policy Adopted	Contact Person	ECs Mentioned?	Policy Summary	Excerpts from Policy	Notes
1.	Village of Cumberland, BC	3,800	Incorporated into overall Procurement Policy approved by Council	28 Nov 2016	Economic Development Coordinator ecdev@cumberland.ca	No	-First municipality in Canada to formally adopt a social procurement policy By expanding the traditional understanding of 'best value' in procurement, to include societal benefits	"6.0 SUSTAINABLE PROCUREMENT PRACTICES: The Village considers the environmental, social and economic value of the goods and services being purchased with the intent to shift spending away from goods and services that negatively impact the environment and society towards products and services that are more environmentally sound and socially beneficial. Recognizing its role as a major purchaser of goods and services, the Village will seek opportunities to encourage and influence markets for environmentally and socially preferable products through employee education; supporting pilot testing of potential new products; and adopting innovative product standards, specifications, and contracts where possible. It is the Village's practice to include sustainability guidelines as value added evaluation criteria in RFPs where practical. The evaluation criteria used will be tailored to the specific competition; however, more points may be awarded for higher impact activities. The Village does not support the purchase of genetically modified (GMO) apples and salmon; and for all other products, the Village prefers to purchase non-genetically modified products where reasonable."	-Case Study: RFP for managing cannabis retail permits (outlined in BSCPI case study) – awarded 50 points for social procurement criteria -“A higher-than-normal weighting of 50 out of 100 overall points was assigned to social procurement. Through this higher weighting, the Village wanted to use social procurement as a tiebreaker for equally qualified respondents in terms of the other criteria and set important expectations before applying for a retail license from the Provincial Government...As part of their submission, respondents were encouraged to identify how they could contribute to the key social, employment and economic goals outlined in the Village's Social Procurement Framework” (From BCSPi case study)
2.	District of Sooke	15,000	Incorporated into overall Procurement Policy approved by Council	14 Dec 2020	Ben Currie, Director of Financial Services bcurrie@sooke.ca	No	-Broadly adopts a best value concept.	“In determining a successful bidder, the District will consider factors such as, but not limited to, total cost of ownership, social impact, community economic impact, environmental impact, source of supply, disposal value, warranty, bidder experience, references, bidder capacity and other relevant costs, not just the lowest invoice price.” (Section 1.1(e))	-Case Study: RFP for Development Approvals Review Process (outlined in BCSPi Annual Report 2022-2023) – awarded 15 points for “Value Added” social procurement criteria, including diverse employees, employee wellness, living wage, and other community benefits.
3.	District of Oak Bay, BC	18,000	Incorporated into overall Procurement Policy approved by Council	9 Dec 2019	Director of Financial Services - Christopher Paine Email: cpaine@oakbay.ca Phone: 250-598-3311 Deputy Director of Financial Services - Linda McCarron	No	-The policy is titled “Sustainable Procurement Policy” but is a comprehensive overall procurement policy.	“The District will seek opportunities to encourage and influence markets for environmentally and socially preferable goods” (Section 2.3) “To reduce carbon footprints the District will, where feasible, purchase goods and services that represent a non-carbon alternative, are carbon neutral, or that minimize greenhouse gas emissions.” (Section 2.4)	

APPENDIX B

SUMMARY OF SUSTAINABLE PROCUREMENT POLICIES + EXAMPLES

Entity	Est Pop Size (2021 Census)	Policy Type	Policy Adopted	Contact Person	ECs Mentioned?	Policy Summary	Excerpts from Policy	Notes
				Email: lmccarron@okbay.ca Phone: 250-598-3311			-Promotes “ total value ” concepts – full costing which considers the full range of costs including acquisition, maintenance, replacement, disposal and training costs associated with goods or services” (Section 7.1)	
4. District of Squamish, BC	24,000	Incorporated into overall Procurement Policy approved by Council	1 Dec 2020	People in Procurement – Tristan Rayner (trayner@squamish.ca) and Craig Milley (cmilley@squamish.ca)	Yes	-Broadly adopts a “Social Procurement” model beyond just sustainability, to achieve Best Value and Social Value.	-Defines “Social Value” as “supporting Council’s objectives as articulated in its Strategic Plan and OCP” (Section 2.36) -Defines “Best Value” as “the optimal combination of compliant responses to the District’s terms and conditions and contract documents; providing the District with the best value in Total Cost of Ownership” (Section 2.3) -“Total Cost of Ownership means the direct social, environmental and financial costs and benefits to the District of products, services and construction during their acquisition, use and end of life phases. All contracts will be evaluated based on the full range of costs that may include acquisition, maintenance, replacement, legal disposal, training costs, environmental and social impacts associated with goods or services.” (Section 2.39) -Directs procurement staff to “work with current and future Suppliers on reducing GHG emissions in the delivery of goods, services, and construction” and “encourage (or require) the use of materials and products that have less embodied carbon” (Section 3) -“The District will endeavor to increase the use of products and services that are more responsible to the environment in the way made, used, transported, stored and packaged and disposed of. It is recognized that analysis is required in order to ensure that the products are made available at competitive prices and the environmental benefits provided by a product or service should not significantly affect the intended use of that product or service.” (Section 3.4)	-BCSPI’s case study says that The District now includes sustainable considerations within the rated criteria for all its competitive bid processes. They have prequalified all consulting contractors using a process where social value represented 30% of the rated criteria and also intend to implement a similar process for service contractors. -Currently building 2 fire halls

APPENDIX B

SUMMARY OF SUSTAINABLE PROCUREMENT POLICIES + EXAMPLES

	Entity	Est Pop Size (2021 Census)	Policy Type	Policy Adopted	Contact Person	ECs Mentioned?	Policy Summary	Excerpts from Policy	Notes
5.	City of Courtenay, BC	29,000	Incorporated into overall Procurement Policy approved by Council	2023		No	Adopts “Best Value Procurement” framework to take sustainability considerations into account	“Sustainability considerations will be balanced against best value requirements for each individual procurement. The weighting toward sustainability in each procurement may be based on the marketplace, Scope of Work and/or level of risk inherent with the procurement. When evaluating sustainability factors, City staff may look to third party verification and certifications when awarding points and may also look to utilize reference checks to verify the content of a submission. When evaluating environmental responsibility in City procurements, points may be awarded where proponents: - Minimize environmental harm, including end of life impacts. - Maximize resource efficiency (e.g. reduce energy and water consumption and minimize waste). - Minimize carbon emissions.” (Section 8)	- Note this approach pits price vs sustainable considerations (versus defining “value” more broadly in order to put sustainability and price into alignment with each other). -Case Study: City of Courtenay RFP for Strategic Cultural Master Plan – awarded 10 pts for social/sustainability considerations
6.	Sunshine Coast Regional District, BC	32,000	Incorporated into overall Procurement Policy approved by Council	12 Sept 2019	Vanessa Schilling Purchasing and Risk Officer vanessa.schilling@scrd.ca	No	Adopts “Best Value” and “Total Cost of Ownership” frameworks to take sustainability considerations into account	-“Best Value” means the optimal combination of total cost, performance, local knowledge, environmental, social sustainability, reduced carbon dependency, and reduced waste. (Section 3) -“Where possible, the SCRD will give preference to the purchase of goods, services and construction that minimize adverse environmental impacts and greenhouse gas emissions and that promote recycling, re-use, and reduction of waste, and promotes a healthy economy.” (Section 4.2) -“The SCRD will use, where appropriate, an evaluation model that incorporates the Total Cost of Ownership of products and services including the environmental benefits which may include sourcing with minimal packaging, sustainable products, and services with low environmental impact (where reasonably quantifiable). These costs will be factored into the vendor pricing, evaluation, and selection process.” (Section 4.15(b))	-BCSPI member -Case Study: RFP for landscaping services (as summarized in BCSPI case study) – awarded 5 points for sustainability criteria. Respondents asked to ID: *The environmental cost of ownership *Use of energy-efficient products *Minimal or environmentally friendly use of packing materials *Reduce hazardous materials (toxins and ozone-depleting substances). “Regional District has put in place a straightforward checklist to accompany their procurement documents. These types of forms and checklist documents can help vendors respond to social value criteria” (from BCSPI case study).

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	Entity	Est Pop Size (2021 Census)	Policy Type	Policy Adopted	Contact Person	ECs Mentioned?	Policy Summary	Excerpts from Policy	Notes
7.	Alberni-Clayoquot Regional District, BC	33,500			Kyle Ilett, Procurement Coordinator kilett@acrd.bc.ca 250-720-2726				-BCSPI member -Case Study: RFP for Curbside Recycling Carts – awarded 15 points for social procurement criteria. Used a questionnaire with yes/no checkboxes and text box for further information (summarized in BCSPi case study)
8.	City of Campbell River, BC	38,000	Standalone policy approved by Council	15 Nov 2021	Clinton J. Crook, Purchasing & Risk Management Officer clinton.crook@campbellriver.ca 250-286-5700	No	-Aligns procurement with City's sustainability goals and community plan -Sustainability to be considered through best overall value, Wood First Policy, and life cycle costs	-“4.1.2. Procurement decisions are not necessarily based on the lowest price but considers the best overall value for its purchasing dollar.” Per Section 1.1, “ Best overall value is the process of considering all identifiable life cycle costs including disposal and environmental considerations, when purchasing goods, services, or construction as opposed to simply considering the lowest price.” -“4.7.1. Council Wood First Policy provides favourable consideration when utilizing wood as a key qualifying criterion for the design, construction and installation of wood structures or wood-use in energy production in City funded projects.” -“4.8.1. Where practical, purchasing decisions are to consider the life cycle costs of the acquisition rather than just the initial purchase price. Life cycle costs include acquisition, operational, maintenance, and disposition costs.”	-BCSPI member -Case Study: RFP for primary General Facility Maintenance and Repair contractor - used to pilot weighting social procurement values. The social value criteria were given a weighting of 15% (summarized in BCSPi case study). -From the BCSPi case study: Respondents were asked to provide a statement of how they would help the City achieve social value for 6 different criteria. The quality of the responses for this initial pilot project helped the City determine that, because social procurement was a new practice and because most of the respondents were smaller local vendors with little experience doing business with government, these types of bidders were unlikely to be able to provide a detailed statement of social value. Based on the lessons learned from this project, rather than asking respondents to provide a statement of social value, the City intends to implement a social value questionnaire-type approach, where respondents can easily choose between “Yes” or “No” answers and provide details relevant to specific questions. The City also identified that providing ongoing public education to vendors and the community about its social procurement objectives would be important for increasing the quality of future bid responses for projects containing social value criteria.”
9.	City of Charlott	39,000	Strategy and Action Plan, not a formal	2023	Katarina Cristall, Chief Climate Officer	No	-Strategy and action plan for aligning	Goal 1 – Develop Sustainable Procurement Program	-Reeve Consulting & CCSP

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etown, PEI		policy change adopted by City Council		kcristall@charlottetown.ca		procurement with the City's sustainability goals, developed by Reeve Consulting and CCSP. -Changes reflecting the action plan to be made to City's Procurement Bylaw at a later date. (City's Procurement Bylaw last amended in 2018.) -Adoption of two-tiered approach: pursue strategy and ID'ing individual high-impact procurement opportunities simultaneously	1. Build a Program in-line with the Canadian Collaboration for Sustainable Procurement (CCSP), 10-Point Best Practice Framework 2. Conduct regular training and communications to build staff capacity 3. Secure sufficient resourcing to create a high-impact Program Goal 2 – Incorporate sustainability into procurement decision-making. 1. Incorporate sustainability into pre-identified High Impact Procurement Opportunities 2. Facilitate approval and implementation of Charlottetown's Procurement Bylaw Goal 3 – Measure and report on program outcomes.	-Case Study: Per CCSP's State of Sustainable Public Procurement in Canada 2022 Annual Report, Charlottetown has a City Works building under construction that has been specified to meet net zero targets. -Case Study: RFP for Ammonia Removal issued May 2024: awards 5 pts for "Sustainability," but the Evaluation Criteria section (Section 4.0) does not clearly spell out what is required for this criterion. Section 1.2 of the RFP says: "The City reserves the right to request suppliers provide documentation to support sustainability claims and declarations.Regarding this RFP, the City of Charlottetown seeks more detailed information about the Proponent's sustainability practices for the ammonia removal and disposal at Simmons Ammonia Removal and Disposal, specifically in the areas of: waste reduction, toxic/ hazardous chemicals reduction and energy use/Greenhouse Gas Emissions (GHGs) reduction."
10 City of Vernon, BC	44,500	Incorporated into overall Procurement Policy approved by Council	24 April 2023	Romona Marshall, Manager of Procurement rmarshall@vernon.ca	No	-Procurement policy addresses economic, environmental, and social sustainability considerations. -"The City's procurement activities will be conducted with consideration of economic, environmental and social sustainability	-"Sustainable Procurement" definition: "Seeks to maximize opportunities to advance positive environmental, social, and ethical impacts and reduce negative impacts while ensuring fiscal responsibility, meeting cost and quality requirements and respecting trade agreements. Will consider both the sustainability impacts of a good or service as well as a supplier's own corporate sustainability practices." (Appendix D) -"Best Value" may include Environmental Sustainability, total cost of ownership, and life cycle costing (Section 1.4) -"City Divisions should consider the inclusion of these evaluation criteria which reflect these	

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						where appropriate. The City will set minimum specifications, evaluation criteria, and contractual requirements that recognize the principles described in the City of Vernon Climate Action Plan.”	[sustainability] factors where applicable. These factors shall be balanced with considerations such as cost and quality and may include...Prioritizing goods and services that represent a non-carbon alternative, are carbon neutral or that minimize greenhouse gas emissions” (Section 1.5)	
11 City of North Vancouver, BC	58,000	Standalone policy approved by Council	Oct 2008	Sabine Zander Manager of Purchasing purchasing@cnv.org 604-983-7392	No	-Adopts financial, sustainable, and social considerations as part of an overall sustainable procurement policy. (p. 4)	-“All decisions for purchases of goods and services for the City of North Vancouver will endeavour to include evaluation criteria that have a sustainable component.” (p. 4) -“All suppliers of goods and services will be required to declare any violations, or determinations by a regulatory body to applicable environmental, employment, human rights and safety legislation. Suppliers will also be asked to provide a statement that describes their firm’s environmental and social practices.” (p. 4) -Purchasing decisions will “take into account the total life cycle environmental cost of the goods or services to be purchased, to the extent that can be estimated” (p. 5) -“Where appropriate, bidders may be required to give an account of the estimated lifecycle environmental costs of the goods or services to be purchased. Bidders may be required to describe ‘end of life’ options which identify the re-use, recycling or sustainable disposal opportunities for the goods being supplied.” (p. 6) -“The City will not proactively seek to certify or inspect compliance upon suppliers, although we do reserve the right to do so. The emphasis	

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	Entity	Est Pop Size (2021 Census)	Policy Type	Policy Adopted	Contact Person	ECs Mentioned?	Policy Summary	Excerpts from Policy	Notes
								of this policy is on voluntary declarations and statements.” (p. 7)	
12	Comox Valley Regional District, BC	72,000	Incorporated into overall Procurement Policy approved by the Board	23 Jan 2018	General phone number for Procurement: 250-334-6000	No	Adopts “Best Value Procurement” framework to take sustainability considerations into account	“Sustainability considerations will be balanced against best value requirements for each individual procurement. The weighting toward sustainability in each procurement may be based on the marketplace, Scope of Work and/or level of risk inherent with the procurement. When evaluating sustainability factors, CVRD staff shall look to third party verification and certifications when awarding points and may also look to utilize reference checks to verify claims made in response to a CVRD public solicitation. When evaluating environmental responsibility in CVRD procurements, points may be awarded where proponents: - Minimize environmental harm, including end of life impacts. - Maximize resource efficiency (e.g. reduce energy and water consumption and minimize waste). - Minimize carbon emissions. ” (Section 7)	-Note this approach pits price vs sustainable considerations (versus defining “value” more broadly in order to put sustainability and price into alignment with each other). -Case Study: Comox Valley Regional District RFP for consultant for greenhouse gas emissions – 10 pts for sustainability considerations (BCSPI Annual Report 2022-2023)
13	City of Victoria	92,000	Incorporated into overall Procurement Policy approved by Council	Revised 27 Feb 2020	Keith Hennessey, Manager of Supply Management Procurement specialist who worked on the RFP for Corporate Security Services: Kathy Daitl, Senior Buyer	No	-Changes to Procurement Policy grew out of “Good Jobs + Good Business = Better Community” Action Plan developed by the Mayor’s Task Force on Social Enterprise and Social Procurement (SESP) and approved by Council on 23 Mar 2017. -SESP plan recommended adopting a Social Procurement	-“The City considers the environmental, social and economic value of the goods and services being purchased with the intent to shift spending away from goods and services that negatively impact the environment and society towards products and services that are more environmentally sound and socially beneficial. Recognizing its role as a major purchaser of goods and services, the City will seek opportunities to encourage and influence markets for environmentally and socially preferable products through employee education; supporting pilot testing of potential new products; and adopting innovative product standards, specifications, and contracts. It is the City’s practice to include sustainability guidelines as value added evaluation criteria in all RFPs. The evaluation criteria used will be tailored to the specific competition; however, more points will be awarded for higher impact activities.” (Section F)	-Case Study: RFP for Corporate Security Services awarded 5 points for “Sustainability and Social Value” (BCSPI case study). The RFP included the following questions: *Provide information on your company’s internal environmental programs, policies, procedures and accreditation that align with the City’s Sustainability Commitment. * Describe how your company works to reduce waste in its daily operations, reduce its greenhouse gas (GHG) emissions, and works to be more energy efficient. *Provide information on your company’s employment policies or practices that are aligned with the City’s Social Procurement Commitment. *Suggest innovative ideas and/or methodologies that you envision in completing this project that are aligned with the Mayor’s Task Force on Social Enterprise and Social Procurement.

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						Framework, supported by change to procurement policy, education, outreach, and pilot program. Lists obstacles as lack of understanding, lack of respondents, City staff capacity.	-Section G.1. ("Social Procurement Foundational Factors and Priorities") identifies social-justice oriented evaluation criteria to be used in future pilots, to be expanded to broader procurement opportunities.	
14 City of Kamloops, BC	98,000	Ethics & Environmental Statement on City's website (not a formal policy)	Unclear	Glen Cheetham, Climate & Sustainability Manager	No	-Expresses preference for "environmentally preferred" projects when practical and can be obtained at reasonable cost.	- "Environmentally preferred products, projects, and services are those that have a lesser impact on human health and the environment when compared with competing products, projects, and services. This comparison may consider: * raw materials acquisition (materials that are abundant in nature, natural and biodegradable, organically grown, fast growing, and sustainably harvested) * production and manufacturing (energy efficient, the use of renewable energy or efficiently used materials) * packaging * distribution * re-use (from recycled content or a recyclable material) * operation * maintenance * disposal options Environmentally preferred products, projects and services will have third party certification acceptable to the City of Kamloops." - "Reasonable cost may require a life cycle cost analysis of the product, project or service."	

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15	City of Nanaimo, BC	100,000	Standalone policy approved by Council	1 Feb 2021	Jane Rushton Manager, Supply Chain Management Jane.Rushton@nanaimo.ca 250-756-5317	No	-Broad statement aligning procurement with the City's sustainability goals -Detailed sustainable guidance for staff, including a Toolkit, to be developed later.	“This means that when the City is making procurement decisions, procurement staff and budget holders will, according to the significance and complexity of the procurement: 1. Consider the sustainability impacts of goods and services in sourcing strategies to identify likely environmental, social, or ethical issues related to a given procurement. 2. Integrate the most relevant desired or mandatory sustainability requirements into competitive bid specifications, solicitation documents and selection processes. 3. Where applicable, include sustainability as part of evaluation processes, alongside other criteria like price, quality, and service, for which weighting will be determined case by case. 4. Communicate with suppliers about the City's sustainable procurement practices and engage with suppliers when opportunities arise to improve their sustainability performance. 5. Incorporate sustainability considerations into standard vendor management and contract compliance practices where appropriate. 6. Set measures to monitor progress of sustainable procurement implementation as well as the benefits achieved.”	-BCSPI member
16	District of Saanich, BC	118,000			Rowan Waldron Rowan.Waldron@saanich.ca - Community Energy Manager Rebecca Newlove Rebecca.Newlove@saanich.ca – Sustainability Manager Ryan Hix Ryan.Hix@saanich.ca - Manager of Project Delivery - Municipal Facilities Division		Procurement policy? Not on their website/collection of bylaws + policies.	https://www.saanich.ca/EN/main/local-government/bylaws.html#letter-f - see for Green Building Policy	-Case Study: District of Saanich designing new firehall to be made of wood / LEED Platinum standard / net zero construction target - https://www.saanichnews.com/local-news/saanich-breaks-ground-on-new-fire-station-as-costs-skyrocket-to-44m-7114681# .
17	City of Kelowna, BC	145,000	Overall procurement bylaw adopted by Council	6 Nov 2017	Darren Tompkins, Manager of Purchasing	No	Adopts “best value” framework	“Best Value” means the most advantageous option for the City while considering a combination of the financial, quality and ancillary attributes of the alternatives under review.” (Section 1.2)	-CCSP member -Case Study: City of Kelowna RFP for Parking Management Services – “Ten points were weighed towards sustainability, including the requirements to utilize electric or other alternative-fuel and zero-emissions vehicles, plus the installation of EV charging stations

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								to be used by the service provider as well as the City's own EV fleet vehicles. Moreover, the City requires Scope 1 tracking from all services and includes a contract clause stating that "if any fossil fuels are used in the performance of the services of the contract, the usage and type of fuel needs to be reported to the City annually." (From CCSP 2023 Annual Report) -From Reeve Consulting website: "Previously, the City used three standard sustainability questions for most RFP's. This approach meant they weren't always evaluating suppliers on sustainability issues that were most impactful for a specific purchase. The City has now evolved their approach by creating: 1. A Matrix: suggested weighting for sustainability, organized by different commodity categories. 2. A Question Library: pre-built RFx questions grouped by sustainability topic (i.e. environmental, social, and governance). 3. An Evaluator Rationale: pre-built out explanations to guide evaluators for more effective scoring." (https://www.reeveconsulting.com/2023/05/18/leveraging-tools-for-sustainability/)
18	City of Richmond, BC	210,000	Adoption of changes to procurement policy approved by Council	Feb 2021	David Aarons, Manager of Purchasing 604-276-4061 DAarons@richmond.ca	No but see Section 11.6	-In Feb 2021, Council endorsed an updated version of the City's Procurement Policy #3104, to include circular economy principles. Part of Richmond's overall vision for -The circular economy is an economic system that aims to maximize the value of resources by design through responsible consumption, minimizing waste and reimagining how resources flow in a sustainable, equitable, low-carbon economy" (Section 15). -City agrees to collaboratively work with suppliers to advance circular economy business models and enviro friendly products/services (Section 11.3)	-May 2023 update says "City staff developed a guide to support staff in integrating circular criteria into procurement activities."

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						a 100% circular economy by 2050 and in alignment with its Sustainability Policy 1400. -City has reflected circular economy requirements within the scope of work and/or has evaluated submissions against specific criteria relating to the circular economy in over 100 competitive processes. See May 2023 update for list of bids, obstacles, steps, learnings.	-City to select suppliers based on “best value,” including economic attributes and, where practical, circular economy outcomes (Section 11.4) -Where possible and economically feasible, specs to be amended to provide for consideration of sustainability and circular economy criteria (Section 11.5) -City to endeavor to increase its use of goods that are more responsible to the environment “in the way that they are made, used, transported, stored and packaged and disposed of” (Section 11.6)	
19 City of Regina, SK	226,000	Adoption of changes to procurement policy approved by Council		Susan Kozey, Strategic Procurement Partner skozey@regina.ca Qaisar Jamal, Sustainable Procurement Specialist procurement@regina.ca	No	-City to implement 2 new procurement protocols by Q2 of 2023: (1) Sustainable Procurement Protocol and (2) Indigenous Procurement Policy.	-“The Sustainable Procurement Protocol will guide City procurement officials in determining who is a ‘Sustainable Supplier.’” -Use of a baseline data gathering phase: “Starting on January 3, 2023, and concluding June 30, 2023, the City will conduct a baseline data gathering phase during which information will be collected from all respondents to develop a baseline measure of its suppliers’ sustainability practices.” This includes data re: “what are the supplier’s environmental practices (reduction of emissions, reuse/recycling of materials, etc.) as well as any reduced emission equipment that will be used during construction or delivery of products or services.”	-CCSP
20 City of Saskatoon, SK	266,000	Incorporated into overall	1 Dec 2018	Jeanna South, Director of Sustainability	No	-Procurement policy addresses economic,	-“Best Value” may include Environmental Sustainability, total cost of ownership, and life cycle costing (Section 2.1.a)	-CCSP

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		Procurement Policy approved by Council		Jeanna.south@saskatoon.ca		environmental, and social sustainability considerations.	-“Environmental Sustainability” means protecting and enhancing the climate, ecology and natural resources for future generations through approaches that reduce carbon dependency, enhance energy resilience, conserve energy and resources and reduce waste and toxins. (Section 2.1.r) -“Verification of Supplier compliance with these [sustainability] principles will be achieved by reliance on a combination of external independent certifications, Supplier disclosures and certifications, and disclosure information about factory and production facilities.” (Section 9)	
21 City of Brampton, ON	656,000	Strategy and framework adopted by Council; formal procurement policy change to come later	6 May 2020	Claudia Santeramo, Manager of Procurement Claudia.Santeramo@brampton.ca Claudia referred me to Jodi Houston, Sustainable Procurement Advisor - Jodi.Houston@brampton.ca	No	-Adoption by Council of phased, long-term strategy to align procurement with the City's social goals (beyond environmental) -Plans include formally updating the Purchasing Bylaw (within 1-2 years), developing Environmental Standards for vendors (within 2-3 years), and creating a Sustainable Procurement Office (3-5 years), including training for city staff and vendors	Medium-term plan (within 2-3 years): “Environmental Standards. In conjunction with the Vendor Code of Conduct, we will develop Environmental Standards for vendors of goods and services to the City. The Environmental Standards consider the life-cycle environmental impacts of products/services, and will align with and support achieving the targets identified in the City's Environmental Master Plan and Community Energy & Emissions Reduction Plan. The Environmental Standards will also define a role for recognized environmental certifications for products.”	-CCSP -Case Study: Retrofit of Susan Fennell Sportsplex to be Net Zero carbon facility: https://www.brampton.ca/EN/residents/Recreation/Revitalized/Pages/Recreation-Revitalized-Susan-Fennell-Sportsplex-Zero-Net-Carbon-Retrofit-.aspx. RFP awarded to Johnson Controls. Construction to start 15 April 2024 and include LED retrofits, lighting controls, ground source heat loop, replacement of refrigeration plants, solar thermal for pool heating, rooftop solar panels, HVAC upgrade. https://brampton.bidsandtenders.ca/Module/Tenders/en/Tender/Detail/90934de7-f7eb-46a6-a39c-322c232e5990

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	Entity	Est Pop Size (2021 Census)	Policy Type	Policy Adopted	Contact Person	ECs Mentioned?	Policy Summary	Excerpts from Policy	Notes
22	City of Vancouver, BC	662,000	Incorporated into overall Procurement Policy approved by Council	Approved 29 Nov 2023, to be in effect 1 Jan 2024	Kim Buksa, Sustainable and Ethical Procurement Manager Kim.Buksa@vancouver.ca	No, but discusses lifecycle costs and reduced carbon dependency	-Incorporates a "Sustainable and Ethical Procurement" section (Section 13) into the overall Procurement Policy based on a Best Value/Total Cost of Ownership model.	-City agrees it "will set minimum specifications for goods and services that achieve environmental benefits such as increased energy and resource efficiency, reduced toxicity and pollution, reduced carbon dependency, zero waste and other environmental attributes" (Section 11.4) -Best Value: "The optimal combination of Total Cost of Ownership, economic sustainability, environmental sustainability, social sustainability, reduced carbon dependency, and zero waste..." (Section G) -Total Cost of Ownership: "The direct social, environmental and financial costs and benefits to the City of products, construction and services during their acquisition, use and end-of-life phases (i.e. lifecycle costs) including factors such as transportation emissions, training, economic development impacts, energy consumption, disposal and other related costs after taking into account sustainability, reduced carbon dependency, and zero waste." -City "will use, where appropriate, an evaluation model that incorporates the Total Cost of Ownership of products and services including environmental, social and economic costs and benefits (where reasonably quantifiable). These costs will be factored into the vendor pricing, evaluation and selection process." (Section 11.5) -City "will give preference where feasible, to products and services that represent a non-carbon alternative, are carbon neutral or that minimize greenhouse gas emissions and thereby contributes to reducing the carbon footprint" (Section 11.6)	
23	City of Winnipeg, MT	750,000	Sustainable Procurement Action Plan prepared by Buy Social	2022	Corinne Evason, Sustainable Procurement Liaison cevason@winnipeg.ca	No	-Adopts 4 pillars of sustainable procurement: environmental, ethical, social, Indigenous (p. 4)	-One of the goals: "Increase energy efficiency and reduce greenhouse gas emissions" (p. 6) - "A set of Sustainable Procurement Questionnaires will be used to evaluate and provide appropriate weighting of the	-Reeve Consulting -See Environmental Procurement Questionnaire: has yes/no checkboxes for each question, with text box for additional info, and guide for how to score the answers.

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		Canada and approved by Council					sustainable procurement component of bid documents.” (p. 7) An “Environmental Procurement Questionnaire” is linked on their website: https://www.winnipeg.ca/building-development/doing-business-city/sustainable-procurement -Other strategies: appointing Sustainable Procurement Liaison, supplier roundtable, advisory table. -Track the following reporting metrics for the environmental pillar: - o Percent of spend on 3rd party eco-certified products - o GHG emission reductions (tCO2 equivalent) reported by City contractors - o Waste reduction or avoidance (kg) reported by City contractors (p. 14)	
24 City of Edmonton, AB	1,000,000	Standalone policy approved by Council	4 July 2022	Sustainable Supply Chain Lead Hieu Lam 780-496-2797 hieu.lam@edmonton.ca	No	- Broad statement aligning procurement with the City's social procurement goals (beyond environmental)	“Environmental Sustainability - The City of Edmonton will identify and integrate environmental sustainability requirements into purchasing procedures and supply chain management processes to advance the City's progress to achieving and maintaining climate resilience including emissions management, reduced pollution, energy efficiency and waste reduction.”	-CCSP

Appendix C: Interviews

Location	Name
BCSPI	Em Chapman, BCSPi Social Procurement Coordinator em@buysocialcanada.com
City of Brampton, ON	Jodi Houston, Sustainable Procurement Jodi.Houston@brampton.ca
City of Charlottetown, PEI	Katrina Cristall, Chief Climate Officer kcristall@charlottetown.ca
City of Nelson	Holli Kosof, Finance & Purchasing hkosof@nelson.ca Suzanne Rorick, Finance & Purchasing SRorick@nelson.ca Emily Mask, Climate Programs Coordinator emask@nelson.ca Sam Ellison, Facilities Manager SEllison@nelson.ca
City of Richmond	David Aarons, Manager of Purchasing DAarons@richmond.ca
City of Winnipeg, MT	Terminder Singh, Sustainable Procurement Liaison tsingh@winnipeg.ca
District of Saanich	Stacy McGhee, Engineering stacy.mcghee@saanich.ca
District of Squamish	Tristan Rayner, Procurement trayner@squamish.ca
Regional District of Central Kootenay	Shari Imada, Senior Energy Specialist simada@rdck.bc.ca

Appendix D: Sustainable Procurement Resources

Part 1: Resources for Sustainable Procurement Models

Topic	Description	Resources
Circular Economy	➤ An economic development model that “emphasizes reuse, share, repair, refurbish, remanufacture, and recycle for a closed-loop system.”⁴⁴ ➤ Has been put into practice most widely in European Union nations, who are leaders in the field of Sustainable Procurement. ➤ Has been adopted by the City of Richmond, who adopted an overall goal to have a 100% circular economy by 2050 and hired a Circular Economy Program Manager to implement and oversee that program.	➤ National Zero Waste Council of Metro Vancouver’s circular economy resource library: https://nzw.ca/focus-areas/circular-economy/resources/Pages/default.aspx ➤ Circular Innovation Council: ○ Membership-based group focused on applying circular economy principles, https://circularinnovation.ca/circular-economy/ ○ Short introduction and how-to guide for implementing circular principles: “Circular Procurement: Strategies for Circular Criteria,” https://canadiancircularcities.ca/p2p-network/Documents/ccri-circular-procurement-strategies-for-circular-criteria.pdf ○ “Moving Toward a Circular Economy: Considerations for Developing a Circular Procurement Framework for Municipalities”: https://circularprocurement.ca/wpcontent/uploads/2021/07/Considerations-for-Developing-a-Circular-Procurement-Framework-forMunicipalities.pdf ➤ Mervyn Jones: ○ Circular economy and circular procurement specialist.

⁴⁴ Circular Innovation Council, *Why Circular Procurement?*

Topic	Description	Resources
		○ Wrote “Circular Procurement Best Practice Report” introducing circular principles: https://circulars.iclei.org/wp-content/uploads/2021/01/Circular-Procurement-Best-Practice-Report.pdf ➤ Circular & Fair ICT Pact webinar introducing circular principles and providing examples: “CFIT Framework for Circular and Fair ICT Procurement”: https://circularandfairictpact.com/news/now-available-webinar-cfit-framework/
Four Pillars of Sustainable Procurement	➤ Model supported by the Canadian Collaboration for Sustainable Procurement (CCSP), according to which Sustainable Procurement has environmental, social, indigenous, and ethical pillars. ➤ Many CCSP member cities have adopted some version of this definition, including Charlottetown, Winnipeg, and Saskatoon. Different cities have focused more heavily on some pillars over others.	➤ CSSP’s “Sustainable Procurement Guide: Tips to Getting Started in Your City,” https://www.reeveconsulting.com/wp-content/uploads/2021/09/CSSPs-Sustainable-Procurement-Guide-for-Local-Government-and-Public-Sector-Leaders.pdf

Part 2A: Resources for Beginning Education/Training Tools Geared Towards Staff

Resource	Description	Where to Access
British Columbia Social Procurement	➤ Led by Buy Social Canada	➤ Paid membership to BCSPi includes access to RFx templates, sustainable purchasing guides, outreach to vendor guides, and a

Resource	Description	Where to Access
Initiative (BCSPI)	➤ A membership-based group for local governments to implement social procurement best practices ➤ Membership fee is based on population size and for the City of Nelson would be \$2,000	training library. Some free case studies are available at: https://bcspi.ca/social-procurement-resources/ ➤ Buy Social Canada has free training guides for purchasers at: https://www.buysocialcanada.com/learn/purchasers/
Canadian Collaboration for Sustainable Procurement (CCSP)	➤ Led by Reeve Consulting ➤ A membership-based group for Canadian public sector institutions to implement sustainability commitments into its purchasing	➤ Paid membership to CCSP provides access to webinars, working groups, and online resource library with guides and RFx templates: https://www.reeveconsulting.com/about-ccsp/ ➤ Some free guides to sustainable purchasing at: https://www.reeveconsulting.com/guides-and-reports/
Canoe Procurement Group of Canada	➤ Membership-based cooperative purchasing group for local governments to aggregate purchasing power ➤ No minimum purchase required	➤ Approved supplier directory: https://canoeprocurement.ca/suppliers/directory/ ➤ List of programs: https://canoeprocurement.ca/programs/ ➤ How to become a member: https://canoeprocurement.ca/members/
Carbon Leadership Forum	Free tools introducing embodied carbon and sustainable purchasing in the building context	Embodied Carbon Policy Toolkit: https://carbonleadershipforum.org/clf-policy-toolkit/ Introduction to Buy Clean procurement policy in the US context (how procurement can reduce embodied carbon), includes links to “Embodied Carbon 101” and “Building LCA 101”: https://carbonleadershipforum.org/buy-clean-policies-overview/
Community Energy Association (CEA)	Produced “A Local Government Guide: Policies, Programs, and Incentives to Reduce Embodied Carbon	https://docs.communityenergy.ca/wp-content/uploads/Embodied-Emissions-Guide_Final.pdf

Resource	Description	Where to Access
	in the Built Environment” in collaboration with Whistler, Squamish, and the Squamish Nation	
Newfoundland & Labrador’s Green Procurement Guide	How-to guide designed to assist public bodies in planning and implementing green purchasing practices	https://www.gov.nl.ca/ppa/files/Green-Procurement-Guide-2023.pdf
Procurement Community of Practice (PCOP)	Free forum for government and public sector staff engaged in procurement to share ideas relating to procurement and contracting	Contact the Procurement Community of Practice at PCOP@gov.bc.ca with any questions or requests to become a member. Membership is no cost and includes: ➤ Webinars on pertinent topics throughout the year ➤ A subscription to the quarterly “Buyer Flyer” newsletter ➤ Notification of training opportunities
The Procurement Office	Paid consultant providing advisory, training, and legal services for public sector procurement	https://procurementoffice.com/
The Procurement School	Paid consultant providing advisory and training services and templates for public procurement	https://theprocurementschool.com/
Reeve Consulting	Paid consultant providing advisory and training services for sustainable procurement. Leads the CCSP.	https://www.reeveconsulting.com/

Part 2B: Resources for Beginning Education/Training Tools Geared Towards Vendors

Resource	Description	Where to Access
Buy Social Canada	Free resources on social procurement for suppliers	https://www.buysocialcanada.com/learn/suppliers/
Canada Green Building Council (CAGBC)	Supports the building sector's transition to green buildings	Launched Zero Carbon Building (ZCB) standards: https://www.cagbc.org/wp-content/uploads/2022/06/CAGBC_Zero_Carbon_Building-Design_Standard_v3.pdf
Carbon Leadership Forum	Free tools for design and construction teams to learn about and measure embodied carbon and to reduce embodied carbon on their projects	➤ Embodied Carbon Toolkit for Architects: https://carbonleadershipforum.org/clf-architect-toolkit/ ➤ Urban Embodied Carbon Reduction Checklist: https://carbonleadershipforum.org/ec-checklist-template/
Green Growth Working Group (GGWG)	Aims to mainstream green and inclusive growth strategies in private sector development, while advocating for the importance of private sector development when implementing green and inclusive growth strategies in other areas of development cooperation	https://www.enterprise-development.org/organisational-structure/working-groups/overview-of-the-green-growth-working-group/
National Zero Waste Council (NZWC)	An initiative of metro Vancouver to bring business, governments, and NGOs together to advance circular economy principles and to prevent and reduce waste	Their website, https://nzwc.ca/, provides informational resources and/or toolkits on: ➤ Incorporating circular economy principles ➤ Construction, renovation, and demolition waste diversion ➤ Reducing food, plastics, and packaging waste

Part 3: Resources for Using Sustainability Criteria in RFx

Resource	Description	Where to Access
British Columbia's Guidelines for Environmentally Responsible Procurement	Includes sample evaluation criteria and response guidelines for the following categories: ➤ travel ➤ transportation for delivery of services ➤ equipment ➤ supplies ➤ reports and manuals ➤ course materials and hand outs ➤ location and transportation ➤ facilities ➤ waste reduction and disposal	https://www2.gov.bc.ca/gov/content/bc-procurement-resources/policy-and-strategies/government-policy-and-guidelines-do-not-alter-content/guidelines-for-environmentally-responsible-procurement
Sustainability Advantage	Free, open source sustainability tools developed by consultant Bob Willard, including: ➤ Business case tools ➤ Bid templates ➤ Supplier assessment tools ➤ Product specifications checklist ➤ Sample Terms & Conditions ➤ Total Cost of Ownership (TCO) tool	https://sustainabilityadvantage.com/
Winnipeg's Environmental Procurement Questionnaire	➤ Requests information from proposers about environmental practices, including GHG emissions ➤ Structured in yes/no format and includes a scoring guide to assist in evaluation	Can be downloaded at: https://www.winnipeg.ca/media/2660

Part 4: Resources for Construction-Related Tools

Resource	Description	Where to Access
Environmental Product Declaration (EPD)	EPDs for construction-specific materials like general use cements and ready-mix concrete already exist	➤ For regional EPDs for ready-mixed concrete, see Concrete Canada (fka Canadian Ready-Mixed Concrete Association CRMCA): https://crmca.ca/epds/ ➤ For North American-wide and Canadian concrete and cement EPDs, see Appendix A of NRC’s “Strategies for Low Carbon Concrete”: https://nrc-publications.canada.ca/eng/view/ft/?id=d15ccce0-277b-4eed-80ac-d0462b17de57 ➤ See LCA² initiative’s EPD repository: https://nrc.canada.ca/en/research-development/research-collaboration/programs/low-carbon-assets-through-life-cycle-assessment-initiative ➤ The Carbon Leadership Forum’s “North American Material Baselines Report” provides a snapshot of the state of EPDs for North American-produced building materials: https://carbonleadershipforum.org/clf-material-baselines-2023/
Government of Canada “Standard on Embodied Carbon in Construction” Requirements	➤ For major construction projects, requires disclosure of, and limits on, the embodied carbon footprint of certain construction materials using EPDs and an Embodied Carbon Disclosure Template ➤ Part of the federal government’s Greening Government Strategy to achieve a 30% reduction in embodied carbon in structural construction materials by 2025	https://www.tbs-sct.canada.ca/pol/doc-eng.aspx?id=32742 (including the Embodied Carbon Disclosure Template)
Life Cycle Assessment (LCA)	Carbon Leadership Forum’s Embodied Carbon Policy Toolkit contains free introductory fact sheets and	https://carbonleadershipforum.org/clf-policy-toolkit/

Resource	Description	Where to Access
	how-to guides re: embodied carbon, EPDs, and building LCAs	
	There are a variety of LCA calculator tools for construction that estimate the carbon footprint of building materials	➤ BEAM estimator tool: Builders for Climate Action's carbon footprint modeling tool that estimates the carbon footprint of building materials and enables comparisons between different materials, https://www.buildersforclimateaction.org/beam-estimator.html ➤ MCE² estimator tool: National Resources Canada's (NRCan) modeling tool to predict the overall GHG impact on the climate of a new home or renovation, https://natural-resources.canada.ca/maps-tools-and-publications/tools/modelling-tools/material-carbon-emissions-estimator/24452 ➤ Guide and links to other embodied carbon calculator tools for construction that are currently available: https://circularecology.com/carbon-footprint-calculators-for-construction.html.
	➤ LCA² Initiative: The Government of Canada's <i>Low-carbon assets through life cycle assessment</i> initiative ➤ Led by National Research Council Canada (NRC) and formed to help the Government of Canada achieve the carbon emissions reduction targets set forth in its Greening Government Strategy	➤ For LCA² Initiative's centralized repository for Canadian life cycle inventory datasets of primary construction materials and other LCA-related materials: https://nrc.canada.ca/en/research-development/research-collaboration/programs/low-carbon-assets-through-life-cycle-assessment-initiative ➤ For a helpful guide to their work, see "Strategies for low carbon concrete: primer for federal government procurement: low carbon assets through life-cycle assessment (LCA)² initiative,"

Resource	Description	Where to Access
		https://nrc-publications.canada.ca/eng/view/ft/?id=d15ccce0-277b-4eed-80ac-d0462b17de57
	whole building LCAs (wbLCA) calculator tools and resources	➤ City of Vancouver’s “Embodied Carbon Guidelines” provide guidance on how to reduce and report on embodied carbons in construction, as required by the building code. Includes guidance on using wbLCA methodology: https://vancouver.ca/files/cov/embodied-carbon-guidelines.pdf ➤ wbLCA calculator tools include: ○ Athena Impact Estimator - https://calculatelca.com/software/impact-estimator/ ○ tallyLCA (formerly known as Tally) - https://www.buildingtransparency.org/tally/tally-lca/ ○ tallyCAT - https://www.buildingtransparency.org/tally/tallycat/ ○ Embodied Carbon in Construction calculator (EC3) - https://carbonleadershipforum.org/ec3-tool/ ○ One Click LCA - https://oneclicklca.com/en-gb/software/design-construction/lca-for-construction ➤ See NRC’s “National Guidelines for Whole-Building LCA” for guidance on implementing wbLCA requirements for major buildings at the federal level: https://nrc-publications.canada.ca/eng/view/object/?id=f7bd265d-cc3d-4848-a666-8eeb1fbde910
LEED	➤ Green building rating system developed and backed by the U.S. Green Building Council (USGBC) .	USBGC’s library of LEED tools: https://www.usgbc.org/leed-tools

Resource	Description	Where to Access
	➤ Projects go through a verification and review process by GBCI and are awarded points that correspond to a level of LEED certification: Certified (40-49 points), Silver (50-59 points), Gold (60-79 points) and Platinum (80+ points)	

Part 5: Resources for Other Purchases

Resource	Description	Where to Access
Hydroelectric purchases		➤ US EPA's Guide to Purchasing Green Power: https://www.epa.gov/greenpower/guide-purchasing-green-power ➤ US EPA's renewable energy contract development best practices: https://www.epa.gov/greenpower/renewable-energy-contract-development-best-practices ➤ American Cities Climate Challenge RFP for off-site renewables power purchase agreement: https://cityrenewables.org/wp-content/uploads/2020/06/ACCC_RA_Off-site_PPA_RFP_Template.docx ➤ Tools from the American Cities Climate Challenge Renewables Accelerator: https://cityrenewables.org/tools-resources/ ➤ Hydropower Sustainability Council's Hydropower Sustainability Guidelines on Good International Industry Practice: https://www.hydrosustainability.org/hydropower-sustainability-guidelines
eco-labels		➤ For key green issues and relevant eco-labels for the following 15 categories of goods, see Newfoundland & Labrador's Green

Resource	Description	Where to Access
		Procurement Guide (Appendices B1-B12), https://www.gov.nl.ca/ppa/files/Green-Procurement-Guide-2023.pdf: ○ appliances, IT equipment, copy paper ○ interior lighting, cleaning supplies, light duty vehicles ○ office furniture, flooring, architectural paints ○ office supplies, food catering services, vehicle consumables ➤ For Reeve Consulting's Factsheets that identify key criteria and relevant eco-labels for office paper, food service ware, coffee and tea, cleaning supplies, IT hardware, catering and food services: https://www.reeveconsulting.com/product-factsheets/ ➤ For University of Saskatchewan's Sustainable Purchasing Guide for Electronic Equipment, including relevant eco-labels, see https://sustainability.usask.ca/documents/commodity-protocols/Electronic%20Equipment.pdf ➤ For a current list of existing ecolabels, see www.ecolabelindex.com
Life Cycle Assessment (LCA)	➤ Use of LCAs is relatively advanced in construction but not as widespread in non-construction related industries. ➤ LCA requirements can pose difficulties for smaller vendors; they are common for large multinational corporations such as Walmart, Dell, Kimberley-Clark, 3M, and Kellogg's.⁴⁵	➤ Free introductory resources to LCAs: ○ Ecochain's "LCA Beginner Course": https://ecochain.com/lca-beginner-course/ ○ Echochain's "LCA: Everything you need to know": https://ecochain.com/blog/life-cycle-assessment-lca-guide/

⁴⁵ NRT EE, *Canada's Opportunity* 55

Resource	Description	Where to Access
	LCA software tools	➤ GaBi: LCA databases by Sphera. https://lcadatabase.sphera.com/ ➤ OpenLCA Nexus features numerous commercial and non-profit third parties that offer LCA databases covering GHG emissions for nearly all food and consumer products: https://nexus.openlca.org/ ➤ Ecochain's Mobius: https://ecochain.com/mobius/ ➤ Ecochain's Helix: https://ecochain.com/helix/
Life Cycle Inventory (LCI)	Note that the most robust LCI databases exist in the EU, and there is a lack of accessible, high quality Canadian data for doing meaningful LCA analysis. ⁴⁶	➤ LCI databases: ○ ecoinvent: https://ecoinvent.org/ ○ open-IO Canada: Life cycle inventory (LCI) database for doing LCA analysis of products and services in Canada, created by International Reference Centre for the Life Cycle of Products, Processes and Services (CIRAIG). Intended to adapt European LCI databases to the Canadian context.⁴⁷ https://ciraig.org/index.php/project/open-io-canada/
Environmental Product Declaration (EPD)		➤ Introduction to EPDs: https://ecochain.com/blog/environmental-product-declaration-epd-basics/ ➤ EPD International's examples of EPDs in non-construction sectors: https://www.environdec.com/library
PCF		➤ PCF FAQs by Dell Technologies: https://www.dell.com/en-ca/dt/corporate/social-impact/advancing

⁴⁶ NRT EE, *Canada's Opportunity* 47.

⁴⁷ CIRAIG, *Carbon Footprint of Procurements* ii.

Resource	Description	Where to Access
		-sustainability/climate-action/product-carbon-footprints.htm#tab0=0&pdf-overlay=//www.delltechnologies.com/asset/en-ca/products/multi-product/briefs-summaries/dell-product-carbon-footprint-calculation-faqs.pdf ➤ Department for Business, Innovation and Skills (UK), “Product Carbon Footprinting for Beginners: Guidance for smaller businesses on tackling the carbon footprinting challenge”: https://www.bsigroup.com/LocalFiles/en-GB/standards/BSI-sustainability-guide-product-carbon-footprinting-for-beginners-UK-EN.pdf

Part 6: Resources for Contracts and Monitoring

Resource	Description	Where to Access
Sustainability Advantage	Free, open source sample Terms & Conditions that address incentives, penalties, and conditions that reinforce supplier sustainability commitments	Part of the Sustainable Procurement toolkit, can be downloaded at https://sustainabilityadvantage.com/sp/toolkit/
County of Marin, CA	Sample Low Carbon Concrete Compliance Forms for Contractors: ➤ Cement limit pathway ➤ Embodied carbon pathway	https://www.marincounty.org/depts/cd/divisions/sustainability/low-carbon-concrete-2022/compliance-forms-for-design-professionals

Appendix E: Glossary of Key Terms

BEAM estimator: Builders for Climate Action’s carbon footprint modeling tool that estimates the carbon footprint of building materials and enables comparisons between different materials.

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 reuse, share, repair, refurbish, remanufacture, and recycle for a closed-loop system.”⁴⁸

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).”⁴⁹

Four Pillars of Sustainable Procurement: Model supported by the Canadian Collaboration for Sustainable Procurement (CCSP), according to which Sustainable Procurement has environmental, social, indigenous, and ethical pillars.

Green Procurement: Procurement practices aimed at reducing greenhouse gas (GHG) emissions, energy and water usage, and toxicity.⁵⁰

⁴⁸ Circular Innovation Council, *Why Circular Procurement?*

⁴⁹ NRT EE, *Canada’s Opportunity* 44.

⁵⁰ CCSP, *Sustainable Procurement Guide* 10.

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.⁵¹

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.⁵²

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.⁵³

LEED (Leadership in Energy and Environmental Design): Green building rating system developed and backed by the U.S. Green Building Council (USGBC). To achieve varying levels of LEED certification, a project earns points by adhering to prerequisites and credits that address carbon, energy, water, waste, transportation, materials, health and indoor environmental quality.

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”.⁵⁴

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.

⁵¹ InnProBio, *Factsheet No. 5*

⁵² InnProBio, *Factsheet No. 5*

⁵³ NRT EE, *Canada's Opportunity* 92

⁵⁴ Dell Technologies, “Understanding Life Cycle Assessments (LCAs) 2

TCO (Total Cost of Ownership): Calculation of the cost of a product after it is purchased, including costs of operation, maintenance, and disposal.⁵⁵

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.

⁵⁵ OECD, "Life cycle costing as a tool" 15.