



The Corporation of the City of Courtenay

Staff Report

To: Council

File No.: 5335-20

From: Director of Infrastructure and Environmental Engineering

Date: January 28, 2026

Subject: Corporate Facility Energy Management Plan

PURPOSE:

To seek council support for the adoption and implementation of the Corporate Facilities Energy Management Plan.

BACKGROUND:

The Corporate Facilities Energy Management Plan (CFEMP) is a strategic roadmap that identifies building upgrades and retrofits required to achieve greenhouse gas (GHG) emission reduction targets in City owned buildings. It presents a multi-year plan to meet provincially legislated GHG reduction targets while improving City facilities. The CFEMP is one component of the Corporate Climate Action Plan update, and a summary of this plan is provided in Attachment 2.

The development of the CFEMP involved analysis of utility data, the completion of energy and emissions building audits, the review of existing documentation, site visits and consultation with City staff and building occupants. The project scope included 29 facilities owned and operated by the City of Courtenay that were organized into two main studies, each with a different grant funding source.

Large facilities with complex energy systems, underwent detailed ASHRAE Level 2 energy assessments. This study included 11 facilities and was funded by the Community Buildings Retrofit Initiative offered by the Federation of Canadian Municipalities Green Municipal Fund. The report for this portfolio of buildings is provided in Attachment 4.

Small buildings, with simple energy systems, underwent less detailed ASHRAE Level 1 energy assessments. This study included 18 smaller facilities such as park buildings, washroom buildings, and storage buildings, and was funded by the BC Hydro (BCH) Integrated Energy Audit program. The report for this portfolio of buildings is provided in Attachment 5.

An analysis of emissions from each facility is illustrated in Figure 1. The emissions profile was generated by compiling annual electric and gas consumption data from across all City of Courtenay facilities.

The largest emitters were found to be Lewis Centre, Public Works Yard, Native Sons Hall, Vancouver Island Regional Library, Comox Valley Centre for the Arts, Firehall #1, and Courtenay and District Memorial Outdoor Pool. These facilities are responsible for 80% of greenhouse emissions from City of Courtenay buildings. A group of eighteen smaller facilities are responsible for 10% of GHG emissions from buildings, and the remaining 10% of emissions are attributed to a combination of the Sid Williams Theatre, the Florence Filberg Centre, LINC Youth Centre, City Hall, Courtenay and District Museum and Palaeontology Centre and Lewis Park.

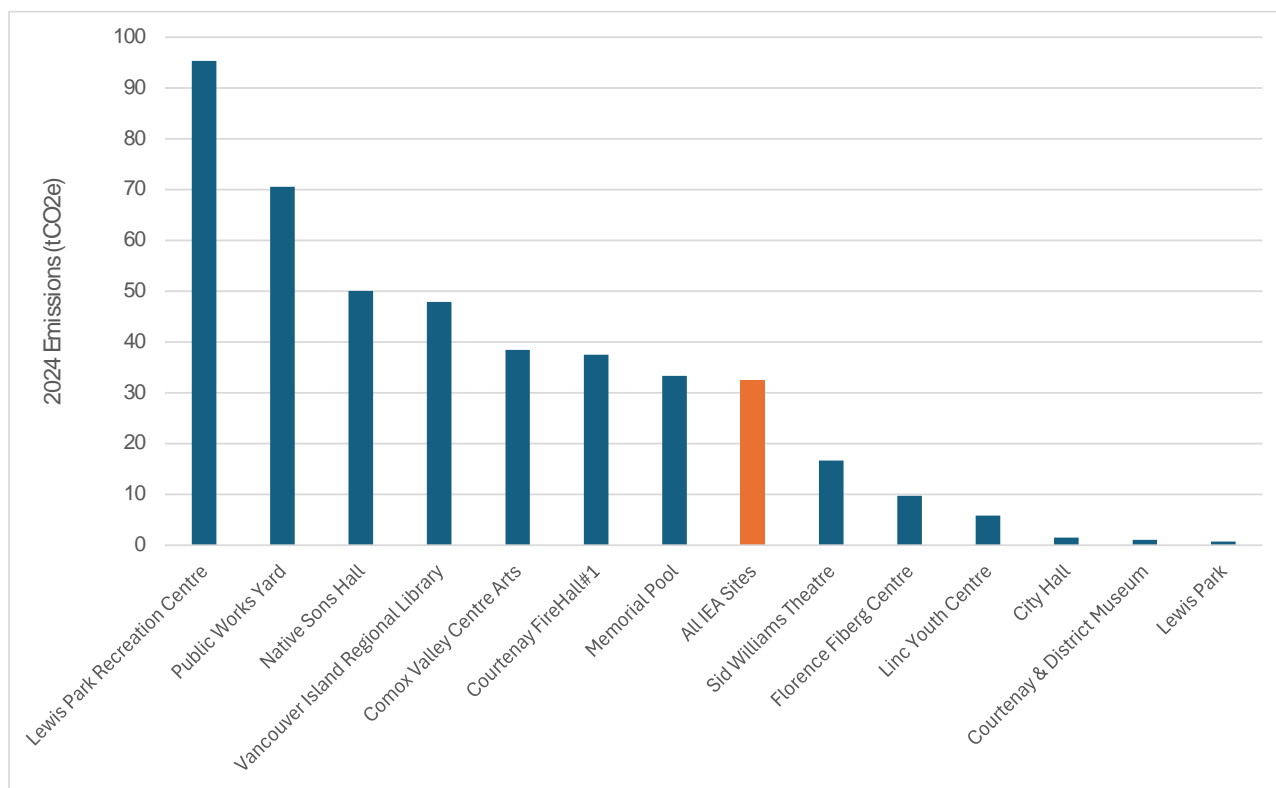


Figure 1: Annual greenhouse gas emissions (reported in tonnes of CO₂e) from each facility

This analysis demonstrated that emissions are most influenced by the volume of natural gas consumed by equipment in the buildings. Emissions are not related to the age of the building – for example, the museum built in 1925, had very low emissions because the equipment in the building was electric.

Several specific projects required to update equipment and improve building performance were identified. Workplans for each building were created, and proposed upgrades were organized into different pathways, with the financial implications and annual GHG reductions modelled for each. The pathways considered included:

1. **Business-as-Usual (BAU):** includes “like-for-similar” replacement of equipment as it reaches the end of its service life. Modest energy efficiency is expected as new equipment is expected to perform better than older equipment, but GHG reduction targets are not met.
2. **GHG Emission Targets** achieves provincial GHG emissions reduction targets while minimizing impacts on the City’s annual budgets and staff capacity.
3. **Aggressive Decarbonization:** maximizes cumulative GHG emissions reductions by prioritizing projects with high fuel saving potential.

These pathways were presented to council on November 5, 2025, and council provided direction:

THAT Council direct staff to include capital costs associated with Pathway 2 – GHG Emissions Targets in the 5-Year Financial Plan.

This aligned with the staff recommendation because it meets the provincial GHG reduction targets before the legislated date of 2030, while allowing time for performance monitoring of equipment to verify it is

working as intended. It also aligns with the lifespan of existing equipment, thereby reducing costs associated with early replacement. The staff report is presented in Attachment 3 for reference.

DISCUSSION:

Implementation of the CFEMP will involve a series of retrofits and upgrade projects in City owned and operated facilities from the present day to 2050. A summary of the implementation plan is provided in Attachment 2, and descriptions of the specific upgrades planned for each facility are outlined in Attachments 4 and 5.

Projects that optimize existing systems are proposed to be completed first, followed closely by projects that replace natural gas equipment with electric equipment. Examples of these projects include lighting, controls, equipment recommissioning and replacing end of life equipment with high efficiency electric options. These types of projects represent the work proposed over the next five years and will offer the greatest GHG reductions in facilities. Once existing buildings are optimized, investments in onsite renewable energy are proposed. Examples include rooftop solar with battery back-up to improve resilience, and lower long term operating costs.

Specific energy upgrade projects identified in this plan will be proposed in the annual budget for council consideration. The proposed 2026 budget includes energy upgrade projects at the Lewis Centre, Firehall, and Native Sons Hall.

The CFEMP recommends the following actions to ensure success of building retrofit and energy upgrade projects:

- Start with buildings that use the most natural gas.
- Align replacements and upgrades with end of life of equipment.
- Work with BC hydro to ensure there is enough electricity supply for planned upgrades.
- Consult building occupants to understand how the building is used and seek to improve comfort wherever possible.
- Apply for grants and seek external funding opportunities for each project.
- Track progress over time, verify and measure building performance, and update infrastructure plans every five (5) years at a minimum.

Implementation of the Corporate Facility Energy Management Plan outlines the upgrades required for existing City facilities to meet GHG reduction targets. Construction of new facilities with natural gas equipment will increase gas consumption and compromise progress in achieving GHG reduction targets. For this reason, it is recommended that new facilities meet the BC Energy Step Code, and Zero Carbon Step Code requirements outlined in the City of Courtenay Building Bylaw.

POLICY ANALYSIS:

The development of the Corporate Facility Energy Management was informed by:

- The CleanBC Roadmap to 2030, the provincial plan to meet 2030 greenhouse gas targets
- The Official Community Plan Bylaw 3070, which outlines municipal emission targets
- The Climate Change Accountability Act, which specifies provincial emission reduction targets

FINANCIAL IMPLICATIONS:

The Financial implications associated with implementation of the Corporate Facility Energy Management Plan are summarized in the table below. These projects and costs are included in the 2026 – 2030 Financial Plan as presented to Council at the November 26th and 27th 2025 Committee of the Whole meetings.

Table 2: Proposed 5-Year Financial Plan for building upgrades and retrofits.

| Facility | 2026 | 2027 | 2028 | 2029 | 2030 |
|---|--------------------|--------------------|------------------|------------------|-------------------|
| Lewis Centre, Outdoor Pool and Lewis Park | \$ 23,000 | \$ 24,500 | \$ - | \$ 39,500 | \$ 893,500 |
| Public Works Yard | \$ - | \$ 123,500 | \$ 26,000 | \$ 239,500 | \$ - |
| Native Sons Hall | \$ 648,500 | \$ - | \$ - | \$ 342,000 | \$ - |
| Vancouver Island Regional Library | \$ - | \$ 107,500 | \$ 389,500 | \$ - | \$ 56,500 |
| Centre for the Arts | | \$ 160,000 | \$ 38,000 | \$ - | \$ - |
| Firehall #1 | \$ 365,500 | \$ 8,500 | \$ - | \$ 173,000 | \$ - |
| Sid Williams Theatre | \$ - | \$ 495,000 | \$ 290,000 | \$ - | \$ - |
| Florence Filberg Centre | \$ - | \$ 83,500 | \$ 222,500 | \$ 58,500 | \$ - |
| The LINC Youth Centre | \$ - | \$ 24,500 | \$ - | \$ - | \$ - |
| City Hall | \$ - | \$ 18,000 | \$ - | \$ - | \$ - |
| Courtenay & District Museum | \$ - | \$ 5,500 | \$ 14,000 | \$ - | \$ - |
| Valley View Field House | \$ - | \$ 16,000 | \$ - | \$ - | \$ - |
| Courtenay Civic Cemetery | \$ - | \$ 16,500 | \$ - | \$ - | \$ - |
| Trades Building & Storage | \$ - | \$ 49,000 | \$ - | \$ - | \$ - |
| TOTAL | \$1,037,000 | \$1,132,000 | \$980,000 | \$852,500 | \$ 950,000 |

The City holds approximately \$1,369,000 of GHG and LGCAP-related reserves as of September 30th, 2025. Some of these funds must be spent by March 31, 2028. It is proposed that these funds be allocated to these building retrofit and energy upgrade projects to minimize the impact on the tax rate.

ADMINISTRATIVE IMPLICATIONS:

The Corporate Facility Energy Management Plan was developed by the Infrastructure and Environmental Engineering Department with support from consultants, Prism Engineering. The development of the plan has been supported by Civic Properties, the Fire Department, and Recreation Facility Operations.

It is expected that implementation of the plan will involve the work of multiple departments.

- Infrastructure and Environmental Engineering will coordinate capital projects to complete building retrofits and upgrades.
- Civic Properties will complete equipment, and facility upgrades as opportunities arise through maintenance schedules.
- Building managers and occupants will be engaged for education, feedback, or to coordinate temporary closures or service disruptions.

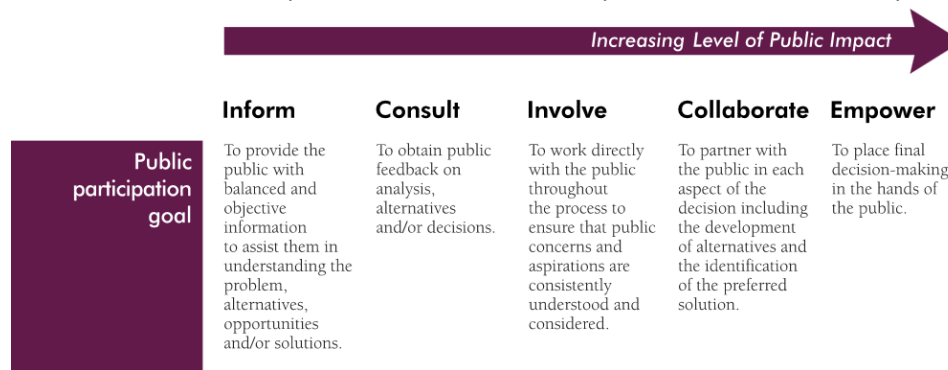
STRATEGIC PRIORITIES REFERENCE:

This initiative addresses the following strategic priorities:

- Natural Environment - Integrate climate change commitment into our governance work: Update Corporate Climate Action Plan
- Natural Environment - Integrate climate change commitment into our governance work: Include climate change lens in staff reports
- Social Infrastructure - Develop measures and criteria to track progress for the OCP's four cardinal directions: reconciliation, community well-being, equity, and climate action

PUBLIC ENGAGEMENT:

Staff would inform the public based on the IAP2 Spectrum of Public Participation:



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OPTIONS:

1. THAT council adopt the Corporate Facility Energy Management Plan to meet the provincially legislated 2030 building sector greenhouse gas emission target of 59-64% below 2007 levels; and

THAT new municipal facilities meet the BC Energy Step Code, and Zero Carbon Step Code requirements outlined in the City of Courtenay Building Bylaw.
2. THAT Council provide alternative direction to staff.

ATTACHMENTS:

1. Presentation – Corporate Facility Energy Management Plan
2. Corporate Facility Energy Management Summary
3. Staff Report – November 5, 2025: Corporate Facility Energy Management Update
4. GHG Reduction Pathway Report
5. Integrated Energy Audit

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