

Corporate and Community Carbon Budget Framework - Status Update

The Priorities and Finance Committee (PFC2021-0121) recommends:

- 3) Direct Administration to develop a Carbon Budget and report back to Council as part of the updated Climate Resilience Strategy, by Q2 2022 (re-scheduled to Q1 2023).

Summary and Background

This attachment provides an overview of how The City of Calgary is developing and implementing a corporate and community carbon budget framework to support strategic policy or financial decision-making. This work is in response to a Council directive (PFC2021-0121) from March 2021 to provide a carbon budget with a potential implementation plan by 2022, and [Calgary's Climate Emergency Declaration](#) (EC2021-1525) in November 2021, that asks “that The City of Calgary develop strategic business plans and budgets across all departments that identify, invest in and accelerate ideas such as high priority emissions reduction, climate risk reduction opportunities, and implementation of a **carbon budget**.”

Currently, carbon budgets for Canadian municipalities are in the early stages of development and limited guidance for development and implementation is available. Calgary is demonstrating leadership and has been working with other Canadian municipalities by sharing our knowledge on developing the carbon budget framework. This report will provide updates on both the corporate and community carbon budget frameworks and outline the next steps of development.

What is a carbon budget?

A carbon budget is the maximum greenhouse gas (GHG) emissions that we can emit from now until 2050 to do our part to keep global temperature rise below 1.5 degrees Celsius. Every action or decision that results in GHG emissions “spends” more of the carbon budget. A carbon budget can be calculated at various scales, including for The City of Calgary corporate operations and for community-wide emissions.

What is the carbon budget framework?

The Carbon Budget Framework is management system that allows The City to integrate corporate and community GHG emissions into key decision-making processes.

When fully developed and implemented, the carbon budget framework will provide transparency about how Administration and Council decisions impact Calgary’s ability to achieve its GHG reduction targets. This ensures the GHG implications of policy or financial investment decisions are clearly understood, allowing decision-makers to make informed choices and understand trade-offs about if the project or investment will get Calgary closer or further from its GHG targets.

The City’s carbon budget framework (Figure 1) is intended to capture GHG emissions from all sources (corporate and community), to align with The City’s corporate and community GHG targets.

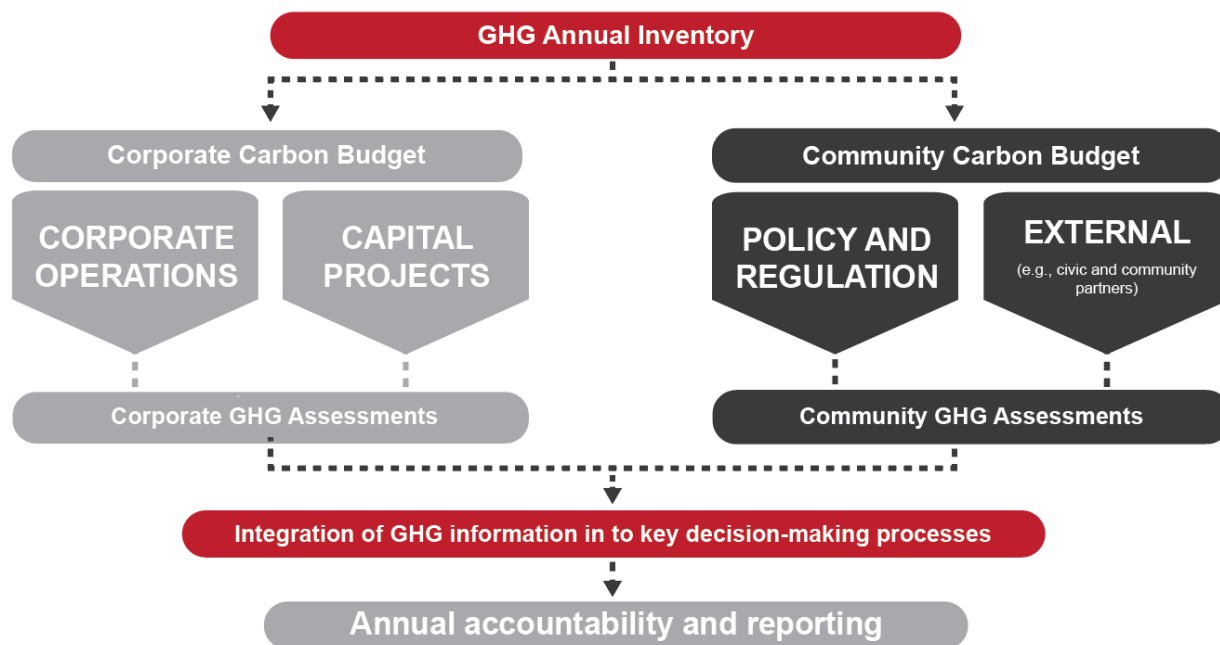


Figure 1: Draft carbon budget framework

Development of the carbon budget framework for The Corporation and community involves different processes and interested parties. Therefore, the corporate and community carbon budgets are discussed separately in the sections below.

Corporate carbon budget framework

The Corporate Carbon Budget framework includes decisions made about City of Calgary projects, investments, operations and infrastructure that relate to City-owned and operated facilities and services.

As part of the 2023-2026 budget submissions, a qualitative assessment of the GHG impact of all capital projects were included on the capital budget one-pagers. Each capital budget ask was evaluated and given one of the following scores:

1. What is the impact of this capital investment on GHG emissions?
Possible answers:
 - Increase GHG emissions
 - No significant increase or decrease in GHG emissions
 - Possible GHG reduction depending on design
 - Reduce GHG emissions
 - Reduce GHG emissions with carbon offsets generated

2. What is the magnitude of the increase or decrease in GHG emissions?
Possible answers:
 - High
 - Low
 - N/A

This was intended to flag the impact of each capital budget ask on the current carbon budget. A quantitative assessment was also provided on the GHG impact for all operational services using energy including natural gas, electricity and liquid fuel.

The corporate carbon budget framework is intended to comprehensively support the evaluation of The City’s decisions as it relates to Calgary’s corporate GHG targets. Components of the carbon budget framework will be developed, piloted and used over the next business cycle (Figure 2); full development and implementation is expected to be rolled out over the next five to six years.

In 2023, the carbon budget framework will continue to be developed and refined to further integrate GHG information in key corporate decision-making processes. As well, to further support each service line in assessing GHG emissions from proposed projects.

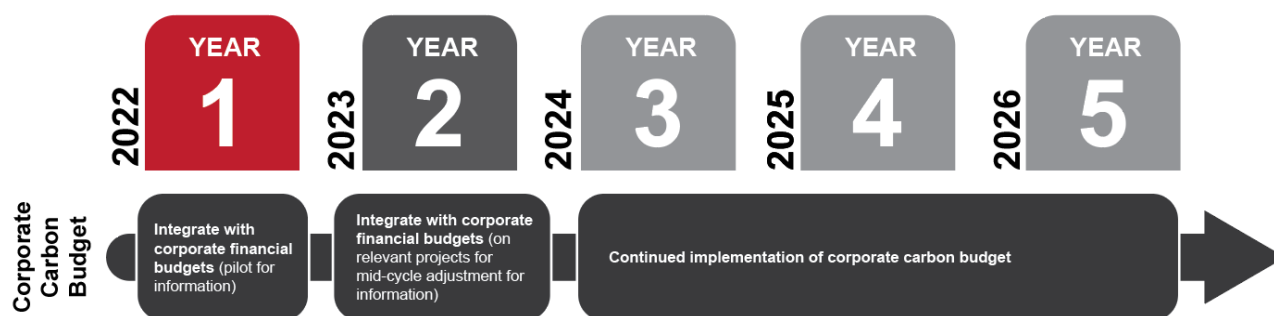


Figure 2: Corporate carbon budget framework timeline

Community carbon budget framework

The Community Carbon Budget does not impose a budget for the community to follow; rather, it looks at educational, incentive, policy, or other decisions that have an impact on GHG emissions in the broader Calgary community (households, businesses, institutions). This might include decisions about how Calgary is developing or how people move around.

Administration is in the early stages of building and testing components of a community carbon budget. As one component of the community carbon budget framework, the quantification of the GHG emissions of proposed new communities is intended to provide transparency on the GHG implications of growth approvals. As part of the 2022 Citywide Growth Strategy recommendations, GHG emissions were considered as part of the business case evaluation process using data from the Integrated City Energy Map and Low Carbon Economy model. These tools and models provided historical energy data as well as the ability to estimate the potential energy savings associated with energy efficiency and renewable energy implementation (e.g., installing solar panels or switching vehicle fuel types). The analysis was developed and refined in consultation with individual business case proponents, who were given the opportunity to review the results with Administration. For 2022, this analysis (based on emission generated by buildings and vehicles only) was also provided to Council (for information only) to establish the link between city-building decisions and associated GHG emissions.

The next phase of the Community Carbon Budget framework will be to develop a methodology to estimate the GHG impact of City decisions on community emissions. In the future GHG implications from new proposed communities for example, will be integrated into the carbon budget framework along with

GHG impacts from other proposed projects and policies as soon as Administration develops methodologies to do so (Figure 3).

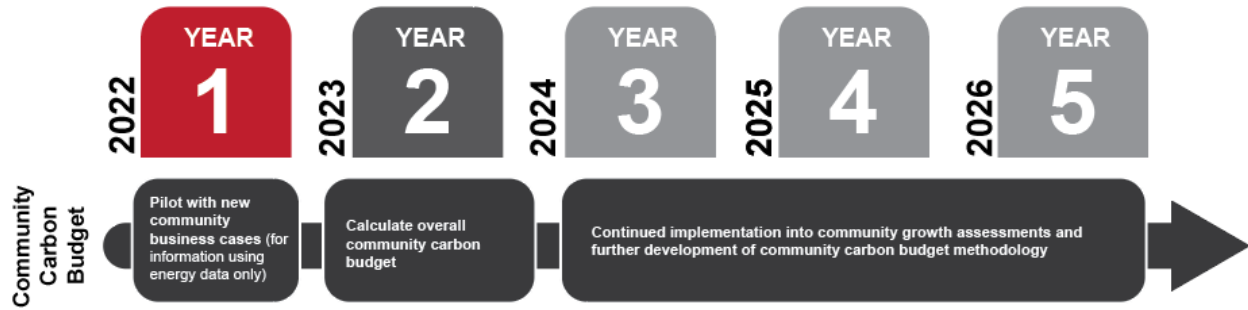


Figure 3: Community carbon budget framework timeline