# Corporate Assets and Clean Energy - Status Update

**NOW THEREFORE BE IT RESOLVED:**

**NoM Action 4**: That Council direct Administration to present a plan to retrofit and update all ***City owned assets*** with clean energy infrastructure and improvement that exceeds current energy standards;

a. The Plan should include anticipated timelines, a costs/savings analysis, and an action prioritization of City-owned facilities and operations
b. Each Business Unit to build carbon targets and actions into their 2023 – 2026 business plans and budgets

## Background and Summary

This attachment provides an update on how The City is managing greenhouse gas (GHG) emissions from corporate operations, including the retrofit and update of all ***City-owned assets*** with clean energy infrastructure and other energy efficiency improvements that exceed current energy standards. City-owned assets are defined as any operations (including buildings, fleet, and processes) that are owned and operated by The City of Calgary, hereby referred to as “corporate operations”.

The City has accelerated commitments to mitigating climate change through the recently passed Climate Emergency Declaration and the Council-approved Calgary Climate Strategy – Pathways to 2050. Both commitments direct The Corporation, among other things, to take action to reduce GHG emissions in our corporate operations. Managing the energy consumption from City-owned assets is one of the most direct ways The City can reduce GHGs, energy costs, and in many cases, the ongoing cost of maintaining associated assets.

Most corporate GHG emissions come from electricity, natural gas, diesel and gasoline consumption, wastewater treatment, and the decomposition of waste at corporate-operated landfills and the compost facility (see Figure 1). The City of Calgary offsets 100 percent of its GHG emissions from electricity use in corporate operations through the acquisition of renewable energy certificates – a market-based instrument that certifies that electricity has been generated from a renewable source.

Over 95 percent of corporate GHG emissions can be addressed by focusing on six priority business units that represent the largest energy consumers and are responsible for managing landfill emissions: Calgary Transit, Water Services, Facility Management, Waste & Recycling Services, Fleet Services and Calgary Police. Figure 1 illustrates GHGs by emissions source in 2019.

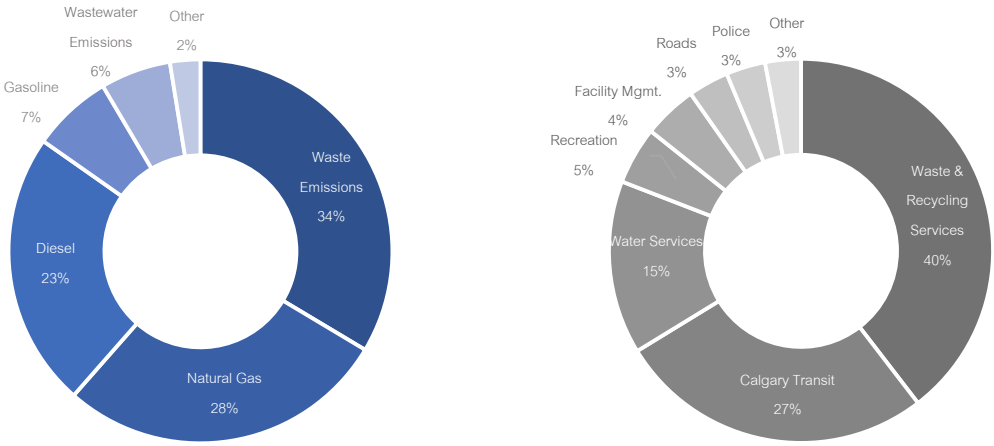


**Figure 1: 2019 GHG emissions by source and business unit, respectively.**

# Current Progress and Next Steps

The City of Calgary has been implementing actions to save energy and reduce GHGs for many years. The City has invested in energy efficiency improvements (to buildings, water treatment, wastewater treatment and streetlighting), renewable energy generation (including solar photovoltaic [PV]), fuel switching and a renewable electricity contract with ENMAX Energy Corporation to supply up to 100 percent of The City's corporate electricity needs from non-emitting renewable sources. These actions have resulted in estimated GHG reductions of over 400 kilotonnes of carbon dioxide equivalent per a year – which equates to removing 87,000 cars off the road every year. Without these GHG reductions, corporate GHGs could have been nearly double what they are now.

The City has developed a framework to describe how we will develop our strategies and processes to manage GHG emissions from corporate assets and operations (see Figure 2 below).

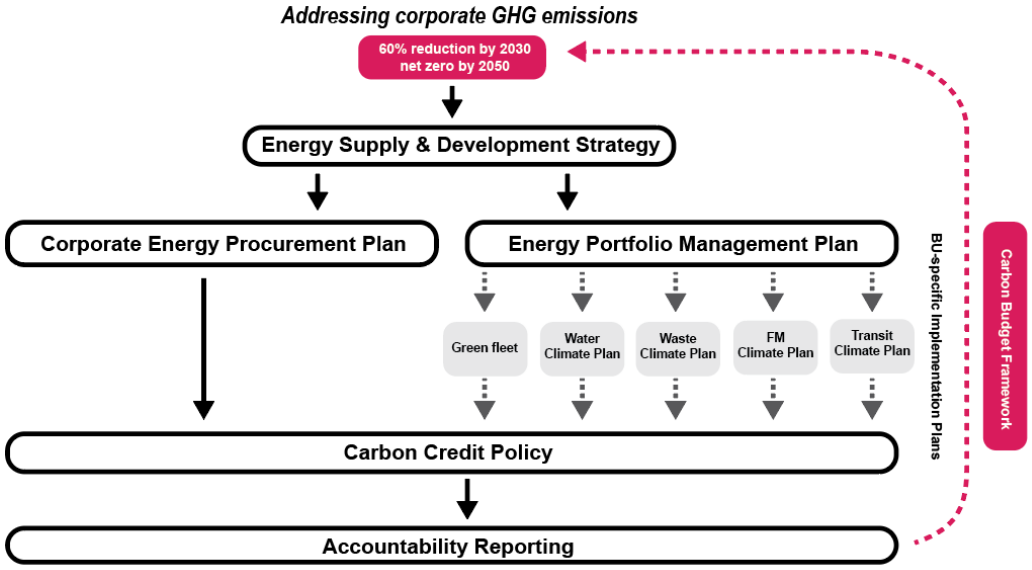


**Figure 2: Framework to address corporate GHG emissions**

The sections below describe the different components of the framework, and how each part will contribute to achieving The City's corporate GHG reduction targets of 60 percent by 2030 from 2005-levels, and net zero emissions by 2050.

## Energy Supply and Development Strategy

The ***Energy Supply and Development Strategy*** guides The Corporation to develop low carbon energy supply options while balancing economic and energy security priorities and will include:

- Guiding principles in the development and management of the energy portfolio, while defining the roles and responsibilities of The Corporation in the development and execution of energy supply and development agreements.
- Low carbon energy portfolio commitments, such as setting a 100 percent renewable electricity target.
- Guidance on leveraging corporate contracts for opportunities to achieve community GHG emissions reduction goals.
- An ***Energy Portfolio Management Plan*** to support informed decisions in applying a 'portfolio approach' to assessing the energy needs of The Corporation, the procurement of energy products and the development of energy generation projects for The Corporation. A 'portfolio approach' ensures that The City maintains flexibility on the types and sources of energy making up the portfolio, enabling The Corporation to pursue an energy portfolio that balances economic, social and environmental resilience.

*When will the work occur?*

Administration will bring an Energy Supply and Development Strategy to Council in Q3 2023 for approval.

## Corporate Energy Procurement Plan

The ***Corporate Energy Procurement Plan*** outlines how The City will establish electricity and natural gas supply contracts that meet the objectives of the Energy Supply and Development Strategy. Guided by the principles outlined in the Energy Supply and Development Strategy, the Corporate Energy Procurement plan will include:

- Forecasts on the electricity and natural gas needs of Calgary for 2027-2046, in collaboration with City business units.
- Assessment of energy procurement options.
- Recommendations that will guide the actual procurement and contract negotiation process.

*When will the work occur?*

The City's current electricity and natural gas supply agreements will end in 2026. Therefore, The Corporation must start exploring energy supply agreements now, particularly if The City wishes to have its energy supplier construct new renewable energy facilities to secure low carbon electricity. Work on the new Corporate Energy Procurement Plan will be part of the Energy Supply and Development Strategy, going to Council in Q3 2023.

## Business Unit Specific GHG Reduction Implementation Plans

Under a business-as-usual (BAU) scenario, where no additional or accelerated climate actions are implemented in the future, corporate GHG emissions would be expected to increase by 19 percent in 2030 and 44 percent in 2050 compared to 2019. The Climate Emergency Declaration (EC2021-1525) and associated Notice of Motion (EC2021-1698) direct The Corporation to "develop strategic business plans

and budgets across all departments that identify, invest in and accelerate ideas such as high priority emissions reduction(s)" and to present a "plan to retrofit and update all City-owned assets with clean energy infrastructure and improvements that exceeds current energy standards with business units to build actions into their 2023-2026 business plans and budgets", respectively.

In response to this direction for acceleration, a complete climate action package was developed and submitted for the 2023-2026 budget and detailed in the Climate Implementation Plan (C2022-1051 Attachment 10). However, additional work will need to be completed to set business unit-specific GHG reduction targets and to identify actions to put The Corporation on track to achieving our 2030 and 2050 GHG reduction targets.

Business unit specific GHG reduction implementation plans are underway to further refine and prioritize actions and to set business unit level targets.

The plans will include:

- Business-unit specific GHG reduction targets
- General strategies that the business unit will focus on to reduce its GHG emissions
- Detailed analysis of some specific actions to be implemented prior to 2030
- Budget and resource requests for actions in time for the 2023-2026 mid-cycle budget adjustment and subsequent budget cycles
- Accompanying implementation and monitoring plans outlining roles and responsibilities for implementing priority actions
- An estimate of how much emission reductions will be achieved from actions by 2030 prior to the purchase of carbon offset credits

Business units are in various stages of developing or finalizing their own climate mitigation plans that could meet many of the criteria required for a business unit GHG reduction implementation plan. Examples of completed plans or plans under development include the Green Fleet Strategy, Calgary Transit's Bus Electrification Strategy, Water Services' Water Climate Change Strategy, Facility Management's Energy & GHG Reduction Plan, and Waste and Recycling Services' Climate Plan. The GHG Reduction Plans will build on the successes of the these existing plans to meet the mentioned criteria.

*When will the work occur?*

2023-2024 to inform mid-cycle adjustments, with regular updates completed 1-year prior to the start of new budget cycles.

# Carbon Credit Policy

There are technical and financial constraints that limit the Corporation's total GHG reduction potential. Unless future actions are identified, the purchase of carbon offset credits or other GHG credit instruments (herein collectively referred to as "carbon credits") will be required for The Corporation to meet its GHG reduction targets.

A carbon credit policy needs to be developed to provide clear direction on when and how to generate, purchase, and sell carbon credits. Guidance at a corporate level is required to ensure that climate impacts are considered when performing carbon credit transactions.

This policy will include:

- The role of carbon credits and their intended uses by The Corporation.
- Descriptions of eligible carbon credits that can be purchased by The Corporation to achieve GHG reductions. There are many types of carbon offsets of varying quality that are traded on different markets. Lower quality carbon credits may not provide the purported emission reductions, exposing The City to reputational risks if purchased and retired to meet its GHG reduction targets. Higher quality carbon offsets provide assurance that emissions are reduced.
- A clear description of tradeoffs for decision-makers who are considering selling carbon credits. The Corporation may want to generate revenue to help pay for incremental costs for emission reduction actions by selling carbon credits instead of retiring them. However, The Corporation can only claim emission reductions towards its GHG reduction target if it retires the carbon credits that it generates or purchases, because when carbon credits are sold the associated GHG reductions are transferred to the new carbon credit owner.
- Roles and responsibilities for purchasing and selling carbon credits.
- Considerations for how revenue generated from selling carbon credits should be used by business units and The Corporation. Climate action may be accelerated if carbon credit sales are designated for further climate action.
- Consequences of non-compliance.
- Exceptions, if any, to the processes laid out in the policy.

*When will the work occur?*

Administration will bring a proposed Carbon Credit Policy to ELT in Q2 2024 for consideration.

## Accountability Reporting

See Attachment 2 in the companion report EC2023-0141 Climate Reporting Framework Status Update.

## Carbon Budget Framework

A carbon budget framework is a management system that integrates GHG considerations into corporate investment decisions. This encourages The City's service plans and budgets to align with its GHG reduction targets and provides transparency when there is misalignment. Given the urgency of reducing emissions, The City requires a systematic way to reduce emissions, to ensure that policies and programs do not lock in future emissions, and to maximize opportunities resulting from the energy transition. The corporate carbon budget framework will establish the process for integrating GHG information into key corporate decisions and will provide transparency into how City decisions will affect GHG emissions. See Attachment 7 for more information.