

FALL 2025 CARBON BUDGET UPDATE

2023-2026 Carbon Budget

Recommendation	
That the November 24, 2025, Financial and Corporate Services report FCS03160, be received for information.	
Requested Action	Information only
ConnectEdmonton's Guiding Principle	ConnectEdmonton Strategic Goals
CONNECTED This unifies our work to achieve our strategic goals.	Climate Resilience
City Plan Values	PRESERVE
Corporate Business Plan	Managing the corporation
Council Policy, Program or Project Relationships	<ul style="list-style-type: none"> ● C567 - Green Building Policy ● C594 - Open Space Policy ● C627A - Climate Resilience Policy ● Community Energy Transition Strategy ● Climate Resilient Edmonton: Adaptation Strategy and Action Plan
Related Council Discussions	<ul style="list-style-type: none"> ● November 14, 2022, Financial and Corporate Services report FCS01478, 2023-2026 Carbon Budget ● November 13, 2024, Financial and Corporate Services report FCS02532, Fall Carbon Budget Update - 2023-2026 Carbon Budget

Executive Summary

- On November 14, 2022, City Council was presented with the City of Edmonton's first carbon budget for the 2023-2026 budget cycle, one of the first municipal Carbon Budgets in Canada. The Fall 2025 Carbon Budget Update provides an annual update to the 2023-2026 Carbon Budget.
- The Fall 2025 Carbon Budget Update includes qualitative and, where possible, quantitative evaluations of the greenhouse gas (GHG) emission impacts for each budget request within the proposed 2025 fall supplemental capital, operating and utilities budget adjustments, and

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can be used to inform financial investment decisions. The carbon budget is presented for information to augment capital and operating budget decisions.

- There are no significant emission impacts associated with the budget requests included in the November 24, 2025, Financial and Corporate Services reports, FCS03158 Fall 2025 Supplemental Operating Budget Adjustment and FCS03159 Fall 2025 Supplemental Capital Budget Adjustment.
- The majority of significant climate initiatives funded in the 2023-2026 budget cycle remain in the carbon budget and are not impacted significantly by the budget adjustments being submitted in fall 2025.
- Based on annual emission reduction targets to reach the 2025 goal, Edmonton's community emissions were targeted to be 12.2 million tCO₂e or less in 2024. The 2024 target was not met making it more challenging to meet 2025 targets. To meet the 2025 target, Edmonton's emissions need to be reduced to 10.8 million tCO₂e (or less) in 2025, equal to 35 per cent below 2005 emissions or 29 per cent below 2024 emissions. The trend for 2025 indicates this target will not be met and there are no current initiatives or actions that will allow the necessary reductions to meet the target.
- In 2024, Edmonton's community emissions were 15.2 million tCO₂e (a three per cent increase from 2023) and 12.8 tonnes per person (a three per cent decrease from 2023). Community emissions have decreased by nine per cent since the 2005 baseline while per capita community emissions have decreased by 46 per cent since the 2005 baseline.
- The years when the community and corporate carbon budgets are expected to be depleted have not changed from the November 13, 2024 Financial and Corporate Services report, FCS02532 Fall 2024 Carbon Budget Update. The community carbon budget is forecasted to be depleted in 2036, one year earlier than forecasted in the original 2023-2026 Carbon Budget. The corporate carbon budget is forecasted to be depleted in 2032, instead of 2033, as originally forecasted.

REPORT

In fall 2022, Administration presented the 2023-2026 Carbon Budget with the proposed capital and operating budgets, to inform and augment Council's financial decisions by providing qualitative and, when possible, quantitative assessments for the GHG emission impacts for each budget request within the proposed 2023-2026 operating and capital budgets.

The carbon budget helps guide decision-making and actions by providing additional carbon emissions information. GHG emission impacts for each budget request within the 2023-2026 capital, operating and utility budgets were used to inform financial decisions throughout the budget deliberation process. The carbon budget is not the same as a capital or operating budget, in that it is not deliberated or approved, rather it is presented for information to guide capital and operating budget decisions.

As part of the City's multi-year approach to the Carbon Budgeting and Accounting Framework, the 2025 Fall Carbon Budget Update (Attachment 1) provides the annual update to the 2023-2026 Carbon Budget. Following the same cycle as the capital and operating budget adjustments, the carbon budget is presented every four years with an annual update in the fall, along with the

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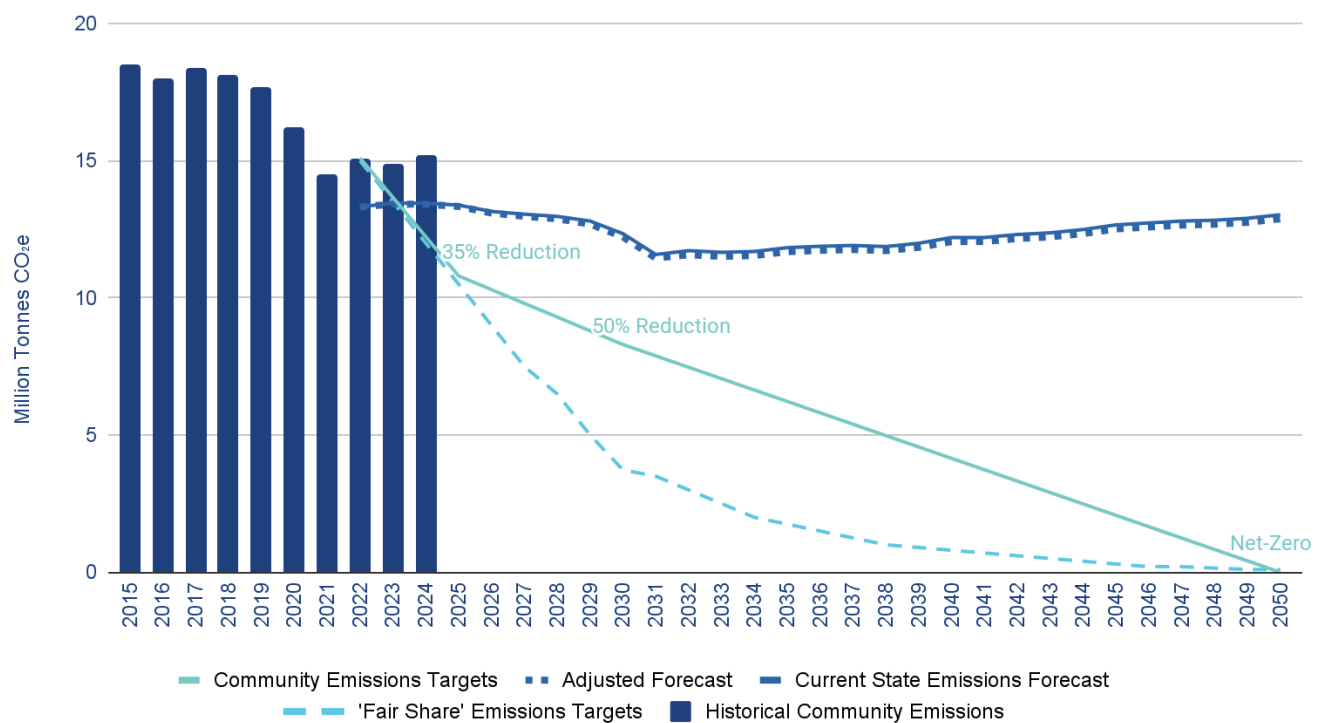
supplemental operating (SOBA) and capital (SCBA) budget adjustments. This fall update also includes assessments for the capital budget adjustments approved by Council in spring 2025, as well as any Council decisions made in fall 2024 that impact the Carbon Budget.

2025 Fall Carbon Budget Update

The Fall 2025 Carbon Budget Update shows further action is needed to achieve community and corporate carbon emissions targets. Overall, the results of the proposed fall 2025 capital, operating and utility budget adjustments are not significantly improving nor contributing to current GHG emission levels.

Community Emission Update

Community Carbon Budgeting - 2025 Budget Updates



The above figure shows Edmonton’s actual versus forecast emission levels since the beginning of the 2023-2026 budget cycle. Edmonton’s actual emissions have remained above both forecasted and target values. Based on annual emission reduction targets to reach the 2025 goal, Edmonton’s community emissions were targeted to be 12.2 million tCO₂e or less in 2024; however, this 2024 target was not met. To get back on track to meet the 2025 target, Edmonton’s emissions need to be reduced to 10.8 million tCO₂e (or less) in 2025, equal to 35 per cent below 2005 emissions or 29 per cent below 2024 emissions. The trend for this year indicates this target will not be met and there are no current initiatives or actions that will allow the necessary reductions to meet the target.

Although limited in its ability to meet the community and corporate GHG emission reduction targets strictly through municipal funding, the City has already taken steps to limit GHG

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emissions. The 2023-2026 approved capital, operating and utility budgets included funding for projects to reduce GHG emissions by an estimated 180,000 tonnes carbon dioxide equivalents (CO₂e) over the four-year period for the community. The majority of these climate initiatives funded in the 2023-2026 budget cycle remain in the carbon budget and have not been impacted significantly by subsequent budget adjustments during the budget cycle.

As reported in the Climate Strategies Annual Implementation Update¹, in 2023-24, the City launched several new initiatives to support the energy transition and build resilience to climate impacts. Examples include the Neighbouring for Climate program which encourages neighbours to act together to adapt their neighbourhoods to a changing climate while mitigating emissions, a permanent Clean Energy Improvement Program which provides eligible property owners access to long term financing for energy efficiency and renewable energy upgrades, and a new Zoning Bylaw that enables a more climate resilient city, among many others.

The years when the community and corporate carbon budgets are expected to be depleted have not changed from the Fall 2024 Carbon Budget Update. The community carbon budget is forecasted to be depleted in 2036, one year earlier than forecasted in the original 2023-2026 Carbon Budget. The corporate carbon budget is forecasted to be depleted in 2032, instead of 2033, as originally forecasted.

The Fall 2024 Carbon Budget Update reported Edmonton's per capita energy use had been reduced by 40 per cent, surpassing the 2030 energy efficiency target set in the Energy Transition Strategy. However, the 2005 baseline was recently recalculated as revised natural gas usage data has become available. As a result, the 2024 Community GHG Inventory shows Edmonton has not yet reached the 2030 energy efficiency target. Energy use per capita continues to decline, and is currently 27 per cent below the 2005 baseline.

The City has completed a GHG impact assessment of each budget request to provide decision-makers with a holistic view of the GHG impacts in the capital and operating budget adjustments. Refer to Attachment 1, Appendix A: Listing of Proposed Budget Adjustments and GHG Impacts for a complete listing of individual budget requests and associated qualitative and quantitative GHG emission impacts.

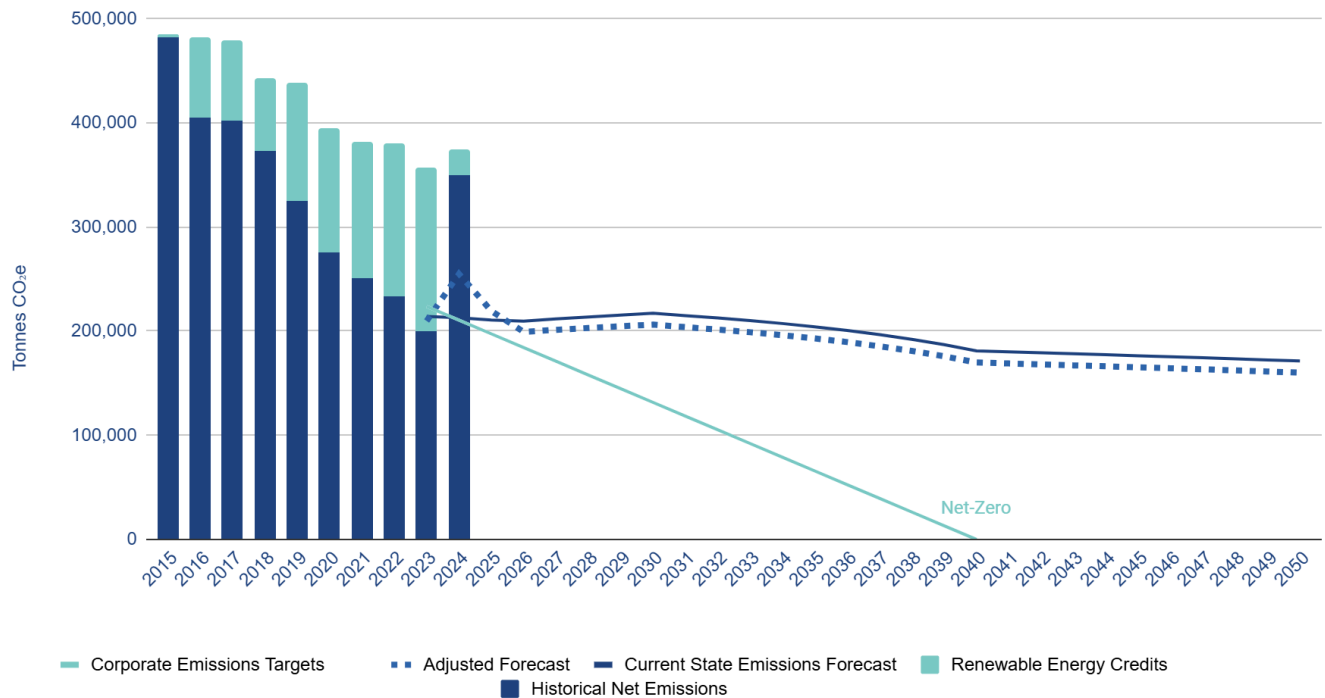
The Fall 2025 SOBA identifies proposed actions to mitigate structural budget variances. These have been evaluated for carbon impacts in Appendix A. These initiatives have no ability to impact greenhouse gas emissions.

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<https://www.edmonton.ca/sites/default/files/public-files/ClimateStrategies-AnnualImplementationUpdate2024-Report.pdf?cb=1762377949>

Corporate Emissions Update

Corporate Carbon Budgeting - 2025 Budget Updates



A majority of the adjustments brought forward within the spring and fall supplemental capital budget adjustment process are for the Project Development and Delivery Model to transfer approved funding between composite and standalone capital profiles; these transfers do not have an impact on the carbon budget unless funding for a project is reduced, resulting in scope changes.

Based on the forecasted current state emissions scenario (which includes the renewable electricity purchase) and impacts quantified from the 2023-2026 Carbon Budget, the corporate emissions would be 816,000 tonnes of CO₂e over 2023-2026. The quantifiable impacts of the 2023 and 2024 budget updates are calculated to increase emissions by 68,000 tonnes, resulting in 884,000 tonnes CO₂e of emissions between 2023-2026. This exceeds the preliminary corporate emissions targets over the 2023-2026 time period of approximately 816,000 tonnes CO₂e, resulting in a carbon deficit of 68,000 tonnes.

In 2024, the City’s net corporate GHG emissions were 16 per cent below Edmonton’s 2005 baseline emissions. The City only offset 25 per cent of the corporate emissions due to the delayed start of the wind project. The delay in the wind project was caused by regulatory changes by the Alberta Utilities Commission. The City of Edmonton’s corporate emissions make up approximately two per cent of the total emissions within the community.

The delayed start of solar and wind energy production in April 2024 and September 2025, respectively, led to an increase in corporate emissions by 191,540 tonnes above the Corporate

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Carbon Budget. This amount is six and a half times higher than the 'high impact' threshold defined in the Carbon Budget's assessment methodology.

The City's net GHG emissions have been decreasing over the last five years. These reductions have come from various sectors. Emissions from City of Edmonton buildings, transit fleet and streetlights have decreased, while emissions from the light duty fleet have remained relatively unchanged.

Community Insight

The 2025 Climate Change and Energy Perception Survey found 74 per cent of respondents agree climate change is a concern, and 77 per cent of respondents express a sense of urgency for action. These results are stable relative to a year ago, and relative to five years ago.

Perspectives from Edmontonians regarding the 2023-2026 budget are outlined in the October 31, 2022, Communications and Engagement report CE01489, Budget 2023-2026 Community Insights. One key theme from this engagement was that participants are concerned about the future and want the City to set long-term plans that take action to improve environmental sustainability and address impacts of climate change.

Additionally, through engagement on The City Plan and to update the Community Energy Transition Strategy, Edmontonians shared their excitement and desires for a low-carbon future. However, there is no clear consensus on actions, approaches and timing.

Administration gathered feedback and input in the development of the carbon budget and accounting framework through discussions with the Energy Transition Climate Resilience Committee. Overall, the committee supported the City's direction with the development of the framework and provided valuable insight into further developing the process.

GBA+

Finding statements from GBA+ research for the City's Energy Transition Strategy include:

- People and families experiencing low-income are disproportionately impacted by climate change because they lack the financial means to implement mitigation and adaptation measures in their homes and communities.
- Women, Indigenous, black and other marginalized people and groups will experience the impacts of climate change more than non-marginalized people and groups as they may already be subject to socio-economic inequalities, and climate change can cause an increase in exposure and susceptibility to the adverse effects of climate change as well as decrease the ability to cope and recover from damages suffered.

The University of Alberta completed research² to explore community vulnerability and resilience in Edmonton in 2021. Finding statements from this research include:

- Older adults are at higher risk from weather and air pollution events.

² CitiesIPCC. "Climate Change, Older Adults And Immigrants: Exploring Community Vulnerability And Resilience. Final report," August 31, 2021

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- Social deprivation (limited interaction with society) and material deprivation (limited ability to afford goods and services) affect sensitivity to weather events and air pollution.

Actions to address these findings are outlined in the Energy Transition Strategy.

Environment and Climate Review

Environment and climate change was identified as one of four key risk themes for the upcoming year in the 2026 Annual Corporate Risk Profile (Financial and Corporate Services report FCS02944, September 3, 2025). The impacts of a changing climate, including rising temperatures, changing precipitation patterns, and more frequent extreme weather events, are already being felt in Edmonton and are anticipated to grow increasingly significant. These challenges pose major risks across multiple city systems, including the economy, health, governance, security, energy and transportation. In response, Edmonton is committed to climate action, guided by the City's two key climate strategies: the Community Energy Transition Strategy and Action Plan and the Climate Resilient Edmonton: Adaptation and Action Plan. The development and implementation of a Carbon Budget and Carbon Budgeting and Accounting Framework was one of the actions outlined in Edmonton's Community Energy Transition Strategy and Action Plan to facilitate progress on the achievement of Edmonton's climate resilience goals.

As detailed in Attachment 1, the Facility: Service Support Renewal project, which includes the installation of a solar canopy at the Westwood Central Service Yard, was evaluated to be associated with a reduction in greenhouse gas emissions. Other projects were identified to either not have an impact or have an impact that was estimated to be positive or negative but not quantifiable.

Overall, the proposed adjustments to the Fall 2025 capital, operating, and utility budgets are not expected to significantly affect current Greenhouse Gas (GHG) emission levels in a way that negatively impacts or advances the City's progress to date. The Carbon Budget continues to deplete at a rate consistent with prior projections, which is expected to hinder the City's ability to achieve established reduction targets. Further and continued action is needed to achieve community and corporate carbon emission targets.

Investments such as fire equipment to support emergency response to fires and technology for early detection of wildfires enhance the City's ability to cope with extreme climate impacts. Furthermore, support for transit and active transportation reduces overall reliance on vehicle-based infrastructure, adding resilience to the transportation system.

Attachment

1. Fall 2025 Carbon Budget Update