Staff Report

Development Services Department *www.kitchener.ca*

REPORT TO:	**Committee of the Whole**
DATE OF MEETING:	**May 5, 2025**
SUBMITTED BY:	**Anna Marie Cipriani, Corporate Sustainability Officer 519-783-8970**
PREPARED BY:	**Fionnula Wade, Sustainability Advisor, 519-707-1464**
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WARD(S) INVOLVED:	**All Ward(s)**
DATE OF REPORT:	**April 10, 2025**
REPORT NO.:	**DSD-2025-133**
SUBJECT:	**2024 Pivot Net-0 update**

RECOMMENDATION:

For information

REPORT HIGHLIGHTS:

- The three-fold purpose of this report is to provide a progress update on 2016-2024 corporate greenhouse gas emissions (GHG) (Appendix A) and our near-term target of an 8% greenhouse gas emissions reduction for 2026; update on the 19 annual progress reporting metrics (Appendix B) and the 47 action items (Appendix C) as identified in *Pivot: Net-Zero*
- The key finding of this report is that the City of Kitchener's corporate GHG emissions have seen a 6% reduction overall from 2016-2024.
- Historical trends alone would predict the City of Kitchener to be on track to meet its near-term target of 8% GHG reduction from 2016 baseline. Historical trends however are not predictive. There are two external threats particularly noteworthy – an increase in carbon intensity of Ontario electricity and a 2025 winter season that likely demanded more energy for space heating and snow clearing than recent years.
- To make progress on our goals we need to continue to prioritize the 3 pathways of energy conservation, fuel switching, and generating renewable energy along with continued advocacy to other levels of government and industry to support these pathways
- Of the 47 actions listed in Pivot: Net-Zero, 24 (51%) have been completed and/or are on-going, 14 (30%) are in progress, 8 (17%) have not been started but are on track for the intended completion date, and 1 (2%) is underway and slightly delayed (Appendix C).

- Community engagement included presentation and discussion with Kitchener's Climate Change and Environment Advisory Committee in their March and April 2025 committee meetings.
- This report supports **Cultivating a Green City Together: Focuses a sustainable path to a greener, healthier city; enhancing & protecting parks & natural environment while transitioning to a low-carbon future; supporting businesses & residents to make climate-positive choices.**

BACKGROUND:

The City of Kitchener has identified a corporate near-term target of achieving an 8% reduction in corporate greenhouse gas (GHG) emissions by 2026 from the baseline year of 2016; as well as a long-term goal of achieving net-zero by 2050. Achieving net-zero emissions means cutting greenhouse gas (GHG) emissions from human activities to as close to zero as possible, with any remaining emissions being absorbed from the atmosphere. This is the first progress report on the organization's second-generation corporate climate action plan called *Pivot: Net-Zero (2024-2027);* approved by Council on April 22, 2024 (DSD-2024-074). The three-fold purpose of this report is to:

1. Provide a progress update on 2016-2024 corporate greenhouse gas emissions (Appendix A) and our near-term target of an 8% greenhouse gas emissions reduction target for 2026;
2. Provide an update on the 19 annual progress reporting metrics (Appendix B), and;
3. Share progress on the 47 action items (Appendix C), as identified in *Pivot: Net-Zero*.

This reporting is provided annually in April/May to align closely with Earth Day.

REPORT:

Progress on Corporate GHGs 2016-2024 (Appendix A)

The City of Kitchener corporate GHG emissions have seen a 6% reduction overall from 2016-2024. Significant and sustained GHG reductions are maintained in the Streetlighting focus area. This is due to the extensive, efficiency-focused LED conversion project completed in 2017 for the cobra head streetlights, and 2022 for decorative post-top lights.

The City of Kitchener's Facilities and Fleet operations continue to grow. Kitchener is among the fastest growing communities in Canada and likewise City of Kitchener service delivery is expanding. As we expand service delivery to the community, we acquire new assets (e.g. buildings, roads, park, utility infrastructure) that must be maintained. The GHG reduction from 2023-2024 is in part due to a warmer winter (less demand of energy for space heating), in addition to efforts to reduce the carbon intensity of our operations. While Fleet & Equipment has seen an increase in GHG emissions from 2016 baseline levels, assets have continued to grow on an annual basis as well. In 2022 alone, fleet assets have increased by approximately 8%, while overall emissions decreased by 3%. This is a promising trend, that may be indicating a decoupling of Fleet growth and GHG emissions that can be sustained into the future with the further implementation of Pivot: *Net-Zero* actions.

There has been a 2% reduction in corporate GHG emissions annually since 2022. This has occurred despite growth in our service delivery to the community. If we were to

extrapolate based on historical data alone, and try to predict the future, one might conclude that we are on track to reach the near-term target of an 8% reduction by 2026 from the 2016 baseline year. Historical trends however are not predictive.

Several external threats outside of our control threaten our ability to reach our 8% GHG reduction target by 2026, including increasing carbon intensity of Ontario electricity and heating degree days.

External Threats to reaching near-term target goal of 8% reduction

Increasing Carbon Intensity of the Ontario Electricity Grid

Ontario's Electricity Grid is known for being "clean," with nearly 90% of electricity coming from zero emissions sources. Ontario currently has one of the lowest carbon intensity factors in the world. Between 2016 and 2024, our corporate electricity consumption fell by 10%, however emissions fell by 34%. It is important to note the potential risks and benefits associated with changes in the carbon intensity of the electricity grid. Such changes are largely out of our control. Recently, there has been a need for high carbon intense electricity generation in Ontario that has resulted in increasing emissions factors for electricity. In 2025, the emissions factor will rise to 38gCO_2e/kWh (from 30gCO_2e/kWh in 2024), which are anticipated to result in an approximate 4% increase in Facilities emissions. When we set our corporate baseline year in 2016, the carbon intensity of the Ontario electricity grid was low. While positive changes to the electricity grid have benefited the City of Kitchener's emissions in the past, this is not anticipated into the future.

Anticipated increase in demand for energy in 2025

Heating degree days (HDD) is a way of quantifying energy demand to heat buildings based on outside temperatures. During colder winters with more heating degree days, it is anticipated that energy consumption for space heating (i.e., natural gas), and the associated GHG emissions, would be higher. When looking ahead to our 2025 reporting, it is probable that there will be an increase in overall corporate GHGs. The first months of 2025 were marked by significant cold weather and heavy snowfall. Energy use for both space heating in our facilities and fleet utilization associated with winter maintenance activities is anticipated to be higher than previous years. Despite modest, incremental emissions reductions to date, we cannot confidently state that these reductions will be sustained into the future.

Calls to Action

Focussing energies where we can, to make an impact on corporate GHGs is the best way to protect our organization from external threats and disruptions while building resiliency towards meeting our long-term net-zero goal. Our capital and operating decision-making today needs to prioritize deep GHG reductions, similar to the net zero choices that have been made with the Kitchener Indoor Recreation Complex. We need to prioritize the 3 pathways of energy conservation, fuel switching, and generating renewable energy. Lastly, continued advocacy to other levels of government and industry to support these pathways is important.

Corporate Indicators (Appendix B)

Appendix B contains a detailed list of the 19 annual reporting metrics for 2024, including but not limited to GHG emissions, carbon intensity, costs, and energy usage across corporate, Fleet and Equipment, and Facilities operations.

Pivot Net-Zero Progress on 47 actions (Appendix C)

Pivot: Net-Zero outlines 47 actions that are foundational to developing a roadmap to align net-zero actions with multiple priorities across the organization (e.g., deferred maintenance, asset renewal, capital planning), streamlining the most strategic approach to making progress on new net-zero target. Of the 47 actions listed in Pivot: Net-Zero, 24 (51%) have been completed and/or are on-going, 14 (30%) are in progress, 8 (17%) have not been started but are on track for the intended completion date, and 1 (2%) is slightly delayed.

STRATEGIC PLAN ALIGNMENT:

This report supports **Cultivating a Green City Together: Focuses a sustainable path to a greener, healthier city; enhancing & protecting parks & natural environment while transitioning to a low-carbon future; supporting businesses & residents to make climate-positive choices.**

FINANCIAL IMPLICATIONS:
None

COMMUNITY ENGAGEMENT:

INFORM – This report has been posted to the City's website with the agenda in advance of the council / committee meeting and presented for discussion with Kitchener's Climate Change and Environment Advisory Committee in March and April 2025 committee meetings.

PREVIOUS REPORTS/AUTHORITIES:

- DSD-2024-074 *CorCAP 2.0 Pivot: Net-0 (*April 22, 2024)

APPROVED BY: Justin Readman, General Manager Development Services
Denise McGoldrick, General Manager Infrastructure Services

ATTACHMENTS:
Attachment A *Pivot: Net-Zero 2024 Progress Update*