

# Staff Report



Development Services Department

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**REPORT TO:** Planning and Strategic Initiatives Committee

**DATE OF MEETING:** April 22, 2024

**SUBMITTED BY:** Anna Marie Cipriani, Corporate Sustainability Officer, 519-741-2200 ext. 7322.

**PREPARED BY:** Anna Marie Cipriani, Corporate Sustainability Officer, 519-741-2200 ext. 7322

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**WARD(S) INVOLVED:** Ward(s)

**DATE OF REPORT:** April 3, 2024

**REPORT NO.:** DSD-2024-074

**SUBJECT:** Corporate Climate Action Plan (CorCAP) 2.0 Pivot: Net-Zero

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## RECOMMENDATION:

That the 2023 City of Kitchener Corporate greenhouse gas (GHG) emissions inventory update be received for information; and,

That Council endorse a corporate 2050 net-zero target; and,

That the second-generation Corporate Climate Action Plan (CorCAP) 2.0 *Pivot: Net-Zero*, Attachment A to DSD-2024-074 be endorsed; and further,

That the Corporate Climate Action Plan (CorCAP) 2.0 *Pivot: Net-Zero*, Attachment A to DSD-2024-074, be submitted to the Federation of Canadian Municipalities, Partners for Climate Protection Program in support of renewed Milestones 1 - 3.

## REPORT HIGHLIGHTS:

- Corporate Climate Action Plan (CorCAP) 2.0, *Pivot: Net-Zero* (Attachment A to report DSD-2024-074) provides a progress update to the end of 2023 on City of Kitchener's corporate GHG reduction target. Currently a 5% GHG reduction is noted from 2016-2023. It is uncertain if this reduction will be sustained without continued intentional changes to our operations. There are two promising trends - sustained reduction in GHGs from streetlights and a potential decoupling of growth and GHGs in Corporate Facilities and Fleet and Equipment.
- The report also ushers a second-generation corporate climate action plan for the City of Kitchener and seeks endorsement of a net-zero by 2050 target for the organization.

\*\*\* This information is available in accessible formats upon request. \*\*\*  
Please call 519-741-2345 or TTY 1-866-969-9994 for assistance.

- The plan strategically focusses on and prioritizes Facilities (Arenas, Administrative Buildings, and Pools) and Fleet and Equipment – areas where the most significant impact can be made in reducing corporate GHGs.
- The three overarching pathways to net-zero are identified as energy efficiency, fuel switching and generating local renewable energy.
- Setting a net-zero target means pivoting our organization. The focus now in our work towards a net-zero 2050 target is in driving down corporate emissions through the three pathways and in the future ensuring that any persisting corporate GHG emissions are removed from the atmosphere.
- There are 47 actions in the plan to 2027 (Attachment B to report DSD-2024-074) that are foundational to further defining the roadmap of our pivot to net-zero; also outlined are action timelines and resourcing.
- Staff intend to report the progress on several indicators yearly near Earth Day (Attachment A to report DSD-2024-074, *Pivot: Net-Zero* Appendix C)
- The financial implications of the organization achieving net-zero are roughly estimated at \$250M in additional capital funding over the next 25 years or \$10M/year.
- Community engagement on the plan included involvement of Kitchener's Climate Change and Environment Advisory Committee
- 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:**

Council previously declared a climate emergency. A first-generation corporate climate action plan was endorsed by Council (DSD-2019-094) and closed-out on March 7, 2022 (DSD-2022-072). This is a second-generation corporate climate action plan. *Pivot: Net Zero* (Attachment A) presents 47 actions to be implemented through to 2027 (Attachment B) that are anticipated to position the organization well in a pivot to net-zero emissions by 2050. Actions are focussed on reducing GHG emissions in Facilities, and Fleet and Equipment; as these focus areas offer the greatest opportunity for impact.

If business as usual continues, our community is anticipated to experience a 5°C increase by the 2080s. We are currently at 1.1°C higher and it is anticipated that at 2°C higher than pre-industrial temperatures, the worst impacts of climate change will be experienced. GHG emissions persist in the atmosphere for decades or longer. This underscores the urgency of climate action work and the need for deep, rapid, and sustained GHG emission reductions, achieved by an energy transition and marked by following the pathways of energy efficiency, fuel switching and generating local renewable energy. The magnitude of a pivot from an 8% GHG reduction target to net-zero is significant. The implementation of this second-generation plan will enable this pivot when coupled with significant investment to do so at scale.

In the summer of 2021 through report DSD-2021-94, Kitchener Council endorsed the Community Climate Action Plan (TransformWR). This plan adopted community GHG reduction targets of 50 per cent by 2030 and 80 per cent by 2050. Since these community targets were set in 2018, there has been a growing understanding and global consensus that in order to avoid the worst impacts of climate change we need to achieve net-zero emissions globally by 2050. Despite the 2050 community target being less than net-zero

and less than what is recommended today as best practice; the actions in TransformWR set our community up for success in a net-zero future.

## **REPORT:**

Our existing corporate GHG reduction target is 8% by 2026. From our 2016 baseline, in 2023 we are seeing a 5% decrease in corporate GHG emissions. In order to sustain these reductions, *Pivot: Net-Zero* identifies 47 actions to 2027 strategically focussing on Facilities, and Fleet and Equipment as these focus areas combined generate 90% of our corporate emissions. Fossil fuels play an important role in our facilities (for space heating and domestic hot water). Space heating alone accounts for approximately 80% of natural gas use at facilities. While in our Fleet and equipment – gasoline and diesel are significant. Gasoline is used primarily for lighter duty vehicles and diesel in medium and heavy-duty vehicles.

The carbon intensity of different energy sources differs. Electricity is the source of 46% of our corporate energy in 2023, yet only accounts for 12% of our corporate GHGs. Natural gas by comparison is the source of 43% of our energy used in 2023– yet accounts for 65% of our corporate GHGs. Transitioning to lower carbon energy sources can make a significant impact on our corporate GHGs.

Facilities are responsible for more than half of Kitchener’s corporate GHG emissions (56%). 85% of these GHG emissions are due to natural gas consumption used for space and water heating. Certain facility types emerge as priority areas for making impact including Arenas, Administrative Buildings and Pools (Attachment A – Figure 4). Eight of our top 10 emitting facilities fall into these three categories, including six within the Sport Division (Arenas and Pools) (Attachment A – Figure 5).

The Fleet Division at the City of Kitchener is an integral part to service delivery across many departments. In total, Fleet is responsible for nearly 600 on and off-road vehicles and equipment, and approximately 500 small handheld pieces of equipment. With strong and consistent support across the entire organization to “electrify when and where possible”, fleet has added 14 battery electric vehicles (BEVs) to their fleet of light duty vehicles (LDVs). LDVs include cars, cargo vans, SUVs and smaller pick-up trucks and they make up 40% of our fleet assets but are only responsible for 20% of fleet emissions. The marketplace currently offers electric options for many LDVs, and this vehicle type is most ready to transition to zero-emission options. By contrast, the medium and heavy-duty vehicle marketplace is limited in its offering of zero emissions vehicle options. Vehicles in this category include dump trucks, large pick-up trucks (e.g., Ford 550) and fire trucks. Medium and heavy-duty vehicles represent 35% of our total fleet assets and 63% of our fleet and equipment emissions (Attachment A – Figure 6). Therefore, even by electrifying all of our light-duty vehicles, the majority of emissions from this focus area will persist until viable options present in the marketplace. Making significant and sustained corporate fleet GHG reductions will continue to be a challenge not readily remedied within the next 5 years.

*Pivot: Net-Zero* seeks Council’s support of a net-zero 2050 target while maintaining our current 2026 target of an 8% reduction from our 2016 baseline. There are 47 actions (Attachment B) identified in the plan from 2024-2027 along with the anticipated year of budget requests, target completion dates and the divisions that will lead and support these actions. These actions are foundational to developing a roadmap that will align net-zero

actions best with multiple priorities across the organization (e.g., deferred maintenance, asset renewal, capital planning), streamlining the most strategic approach to making progress on a new net-zero target. Staff intend to report on progress indicators (Attachment A, *Pivot Net-Zero* Appendix C) yearly near Earth Day. Scaling up and directing funding sources within municipal control to accelerate corporate climate action work is needed in addition to seeking outside support (e.g., through advocacy and grants).

### **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:**

Significant capital investments will be required to sustain deeper corporate GHG reductions. As technological solutions emerge and are deployed across our organization, we may see financial benefits such as decreased capital expenditures and operational savings for instance. It is estimated that \$250M in additional capital funding will be needed over the next 25 years (or \$10M/year) to work towards achieving net-zero GHG emissions by 2050. Such a substantial investment in this corporate focus would likely require the use of several financing options such as pursuing external grant funding opportunities, utilizing ongoing funding from the City's energy reserve fund, potentially issuing debt, and consideration of other funding strategies. For context, a 1% increase to the City's tax rate generates \$1.6M in additional revenue. Ongoing advocacy with other levels of government for funding will be important as the City will not be able to achieve this new target without significant funding being provided from other levels of government.

### **COMMUNITY ENGAGEMENT:**

Throughout the development of the report staff informed and consulted the Climate Change and Environment Committee. Motions from the committee include the following:

January 18, 2024: "That the committee support the City of Kitchener corporate net-zero by 2050 target and incorporate periodic updates to the Climate Change and Environment Committee.

February 15, 2024: "That the committee support the City of Kitchener proposed metrics for annual reporting on progress towards our corporate goal of net-zero carbon emissions by 2050".

March 21, 2024: "That the committee endorse the draft City of Kitchener Corporate Climate Action Plan 2.0 *Pivot: Net-Zero*, with emphasis on the urgent need to assess the potential and value of expanding additional funding sources within our control".

### **PREVIOUS REPORTS/AUTHORITIES:**

- DSD-2024-074

**APPROVED BY:** Justin Readman

### **ATTACHMENTS:**

Attachment A – *Pivot: Net-Zero*

Attachment B – *Pivot: Net-Zero* Actions by Division (Appendix B)