

Serving climate-friendly meals through City services - Cool Food Pledge commitment and food-related greenhouse gas emissions

Date: June 18, 2024

To: Infrastructure and Environment Committee

From: Executive Director, Environment and Climate

Wards: All

SUMMARY

This report outlines the food-related greenhouse gas (GHG) emissions associated with meals served by the City of Toronto (the "City") in relation to its [Cool Food Pledge](#) (CFP) commitment. Specifically, it outlines how the City is exploring a shift to climate-friendlier meals in order to reduce corporate food-related GHG emissions and meet its Cool Food Pledge commitments.

In 2019, Toronto became a signatory of the World Resources Institute's (WRI) CFP and committed to reducing GHG emissions from corporate food procurement by 25 per cent by 2030 relative to 2019 levels. The City is also a [C40 Good Food Cities](#) signatory, pledging to achieve a planetary health diet for Toronto residents by 2030. Furthermore, the City is also currently undertaking actions that align with the Plant Based Treaty, a voluntary treaty that the City has not formally signed, which aims to reduce the widespread degradation of ecosystems worldwide caused by animal agriculture by promoting a shift to more healthy, sustainable plant-based diets.

For the year 2019, Toronto's food-related emissions were measured at 46 kt (kilotonnes) of carbon dioxide equivalent (CO₂e).¹ Of those emissions, nearly half were attributable to beef and lamb alone, which comprised only three per cent of total food purchased by weight.

Corporate food-related procurement data

Three City Divisions -- Seniors Services and Long-Term Care (SSLTC), Toronto Shelter and Support Services (TSSS), and Children's Services (CS) -- procure the vast majority of food purchased by the City, serving approximately seven million meals annually. In 2022, these Divisions purchased a combined 3,207 tonnes (t) of food, which resulted in

¹ <https://www.toronto.ca/wp-content/uploads/2023/11/914f-2019-Corporate-Consumption-Based-Emissions-Inventory-Report.pdf>

about 43,905 t CO₂e. Of that, 87 t of food purchased were beef which accounted for 48 per cent of corporate food-related emissions.

City Divisions are taking actions toward meeting the City's CFP target. For example, in January 2024, TSSS signed the [Forward Food Pledge](#), committing to transitioning at least 33 per cent of animal-based foods to plant-based by 2027 relative to 2024. CS was able to reduce food-related GHG emissions by 43 per cent relative to 2019 levels, surpassing the CFP target by almost eliminating beef from the menu.

Meaningful consultations with the varied populations being served by the City will ensure that proposed strategies to meet the City's CFP target do not further burden populations already disproportionately impacted by climate change, food insecurity and other inequalities.

The City is taking steps in becoming one of the few jurisdictions in the world aiming to address this complexity by meaningfully reducing our emissions from corporate food procurement through key City service areas. A multidisciplinary, multi-Divisional approach will help facilitate discussions and enable the City to meaningfully reduce its food-related emissions while considering the complexities associated with serving climate-friendly meals through its services.

RECOMMENDATIONS

The Executive Director, Environment and Climate, recommends that:

1. City Council direct the Executive Director, Environment and Climate, General Manager, Children's Services, General Manager, Toronto Shelter and Support Services, and General Manager, Seniors Services and Long-Term Care in consultation with the Executive Director, Social Development, Finance & Administration, Chief Procurement Officer, Purchasing and Materials Management, and Medical Officer of Health, Toronto Public Health, to determine what combination of climate-friendly meals are feasible to meet the dietary needs and food preferences of populations being served by the three City divisions (SSLTC, TSSS, and CS), and how to implement these changes at the plate level in order to meet the City's Cool Food Pledge and the C40 Good Food Cities Declaration commitments.
2. City Council direct the Executive Director, Environment and Climate to include in the upcoming Consumption Based Emissions Inventory report in 2027, the progress and actions in meeting Toronto's Cool Food Pledge and the C40 Good Food Cities Declaration commitments.

FINANCIAL IMPACT

There is no financial impact to the approved 2024 Operating and Capital budgets for the Environment and Climate (E&C) Division. Any incremental financial impacts will be included in future year Budget submissions across the three relevant City Divisions (SSLTC, TSSS, and CS).

The Chief Financial Officer and Treasurer has reviewed this report and agrees with the financial implications as identified in the Financial Impact section.

DECISION HISTORY

On October 11, 2023, the Executive Director, Environment and Climate, reported back to Council as part of the Consumption-Based Emissions Inventory and Cool Food Pledge Commitments. ([2023.IE6.6](#)). At that meeting, City Council further directed the General Manager, Environment and Climate, in consultation with the Chief Procurement Officer, to report back to the Infrastructure and Environment Committee in the first quarter of 2024 with recommendations on whether Toronto should adopt a policy on plant-based purchasing savings for City and climate, comparable to a program in the City of Vancouver

In addition, City Council adopted the TransformTO Net Zero Strategy (NZS) along with related directions, including the Cool Food Pledge initiative ([2021.IE26.16, #17](#)). Specifically, City Council directed the Director, Environment and Energy (now Environment and Climate), in coordination with Executive Director, Social Development, Finance and Administration (SDFA) and the Chief Procurement Officer, Purchasing and Materials Management Division (PMMD), to identify ways that the City can support the reduction of the GHG emissions associated with food the City of Toronto procures, in alignment with the City's Cool Food Pledge and the C40 Good Food Cities Declaration, and to report back in the second quarter of 2023 on the status of corporate and community food-related emissions and recommended actions for the TransformTO 2026-2030 short-term action plan, including a goal to maximize local, organic and fair trade food procurement.

On December 15, 2021, Toronto City Council endorsed the NZS ([2021.IE26.16](#)) and an associated TransformTO NZS Short-term Implementation Plan 2022 – 2025. The NZS Short-term Implementation Plan, item 15b commits the City to conducting a consumption-based emissions inventory and identifying targets that would meaningfully reduce consumption-based emissions.

On October 2, 2019, City Council declared a Climate Emergency and pledged to accelerate the City's climate action plan, including the development of a plan to measure, monitor, and reduce consumption-based (lifecycle) GHG emissions ([2019.MM10.3](#)). Additionally, on November 26, 2019 the committed to achieving the World Resources Institute's Cool Food Pledge to reduce the greenhouse gas emissions associated with the food the City of Toronto procures ([2019.HL10.2](#)).

COMMENTS

The City of Toronto's TransformTO Net Zero Strategy (NZS)² aims to create a net zero carbon future that is equitable, healthy, prosperous, and resilient.

2 <https://www.toronto.ca/legdocs/mmis/2021/ie/bgrd/backgroundfile-173758.pdf>

Food systems are a significant contributor of consumption based emissions in Toronto and are estimated to contribute a third of GHG emissions globally.³ Emissions from food are generated by crop and livestock production activities, land-use changes that cause deforestation and peatland drainage to make room for agriculture, along with food manufacturing, packaging, retail, refrigeration, transport, household consumption and food disposal.⁴ Worldwide, meat production can emit 50 times more emissions than plant-based foods.⁵

The City has made a number of commitments to reduce food-related emissions and work towards sustainable, climate-friendly diets.

In 2019, Toronto became a signatory of the World Resources Institute's (WRI) CFP and committed to reducing GHG emissions from corporate food procurement by 25 per cent by 2030 relative to 2019 levels.

The City is also a [C40 Good Food Cities](#) signatory, pledging to achieve a planetary health diet for Toronto residents by 2030 by implementing policies that make healthy, sustainable, and low-emission food options more accessible to all residents. This commitment involves a multi-faceted approach, including reducing food loss and waste, supporting an ecosystem that promotes diverse and nutritious diets, and reducing emissions from food that the City procures. Toronto's adherence to the C40 Good Food Cities Declaration reinforces its strategy to achieve the targets set by the CFP, showcasing its approach to integrating sustainable food policies and climate action.

Meeting the CFP and C40 commitments contribute to global efforts to reduce emissions by addressing lifecycle emissions generated outside the boundary of Toronto.

Plant Based Treaty

Along with the commitments and declarations already made by the City, E&C also reviewed an additional global commitment, the [Plant Based Treaty](#) (PBT). The PBT was created in 2021 and modeled on the [Fossil Fuel Treaty](#). The PBT Treaty aims to reduce the widespread degradation of ecosystems worldwide caused by animal agriculture, to promote a shift to more healthy, sustainable plant-based diets and to actively reverse damage done to planetary functions, ecosystem services and biodiversity. The Treaty has been endorsed by 27 cities worldwide and more than 144,000 individuals, 1,300 organisations and 1,700 business endorsers have signed to date.

The Treaty is divided into three sections or 'Demands', with a total of 40 items listed under the three demands. After review, E&C staff observed that work underway by the City already aligns with the Treaty and more specifically, of the 40 items listed,

3 Food and Agriculture Organization of the United Nations. (2022) Greenhouse gas emissions from agrifood systems - Global, regional and country trends, 2000–2020 FAOSTAT Analytical Brief 50.

4 Tubiello *et al.* (2021) Greenhouse gas emissions from food systems: building the evidence base. *Environ. Res. Lett.* 16

5 Poore and Nemecek. (2018) Reducing food's environmental impacts through producers and consumers. *Science*, v 360:6392.

determined that 28 of the items are outside of the City's jurisdictional powers but of the 12 remaining items, the City is addressing all of them.

Meeting Corporate food-related GHG emissions

2019 baseline

To meet the CFP target of reducing food-related emissions by 25 per cent by 2030, relative to the 2019 baseline, the City first reported its 2019 baseline measurements in the inaugural [Consumption-Based Emissions Inventory \(CBEI\)](#). The baseline was derived by 2019 food procurement data from three Divisions (SSLTC, TSSS, and CS) which serve seven million meals and 3,000 t of food annually. These three divisions were the focus of the study because they are the top purchasers of food among City of Toronto Agencies, Boards, Commissions, and Divisions.

In 2019, Toronto's food-related emissions were measured at 46 kt CO₂e which is about two per cent of the total corporate CBEI.⁶ Of those emissions from food, nearly half were attributable to beef and lamb alone, which comprised only three per cent of total food purchased by weight.

GHG emissions of current food purchases (2022 and 2023 Q1 - Q3)

Figure 1 shows the breakdown of food type and category by weight purchased by the three City Divisions in 2022 which totalled 3,206,673 kg or about 3,207 t. The two largest food types were “Other Plant-Based Foods” at about 42 per cent of the purchases, mainly driven by fruits and vegetables (32 per cent), and “Other Animal-Based Foods” at 40 per cent, of which the majority (29 per cent) was dairy. The third food type was “Plant proteins,” at 15 per cent, driven by grains (13 per cent). Ruminant meats (beef and lamb) accounted for only 3 per cent of purchases.

Figure 2 shows the GHG emissions related to the food purchased by the City of Toronto in 2022, which totalled 43,905 tCO₂e. Ruminant meats, of which beef accounted for 99 per cent, are the most significant contributors, accounting for nearly half (48 per cent) of the total emissions.

⁶ <https://www.toronto.ca/wp-content/uploads/2023/11/914f-2019-Corporate-Consumption-Based-Emissions-Inventory-Report.pdf>

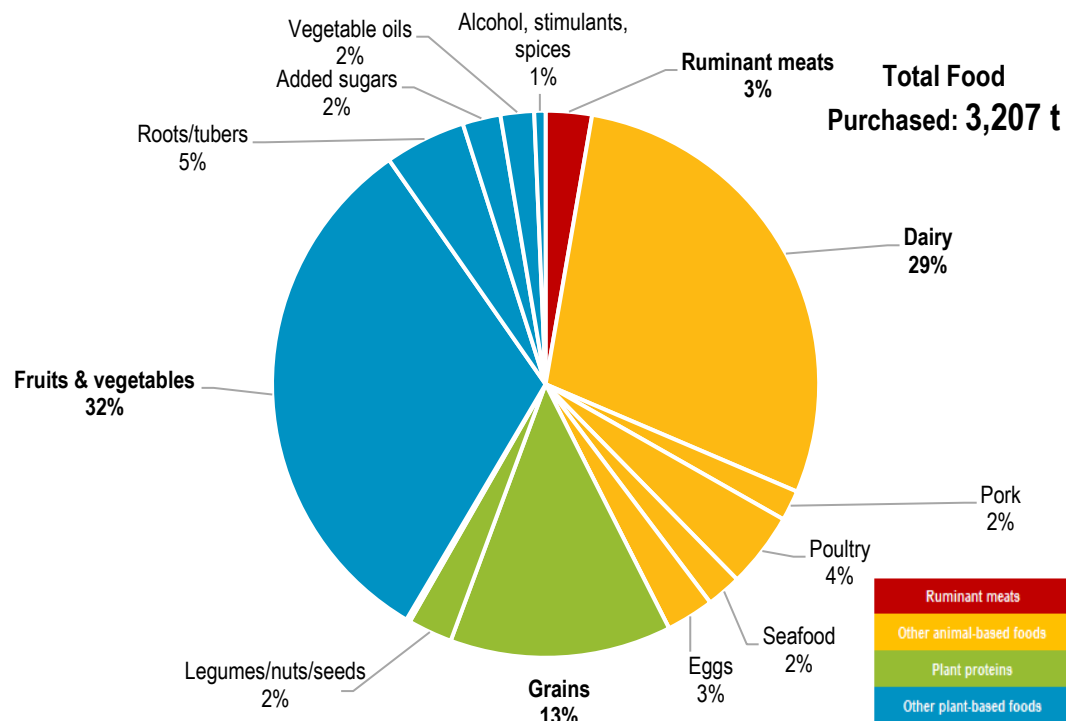


Figure 1: City of Toronto food purchase data by weight for 2022 for the three Divisions, CS, TSSS and SSLTC.

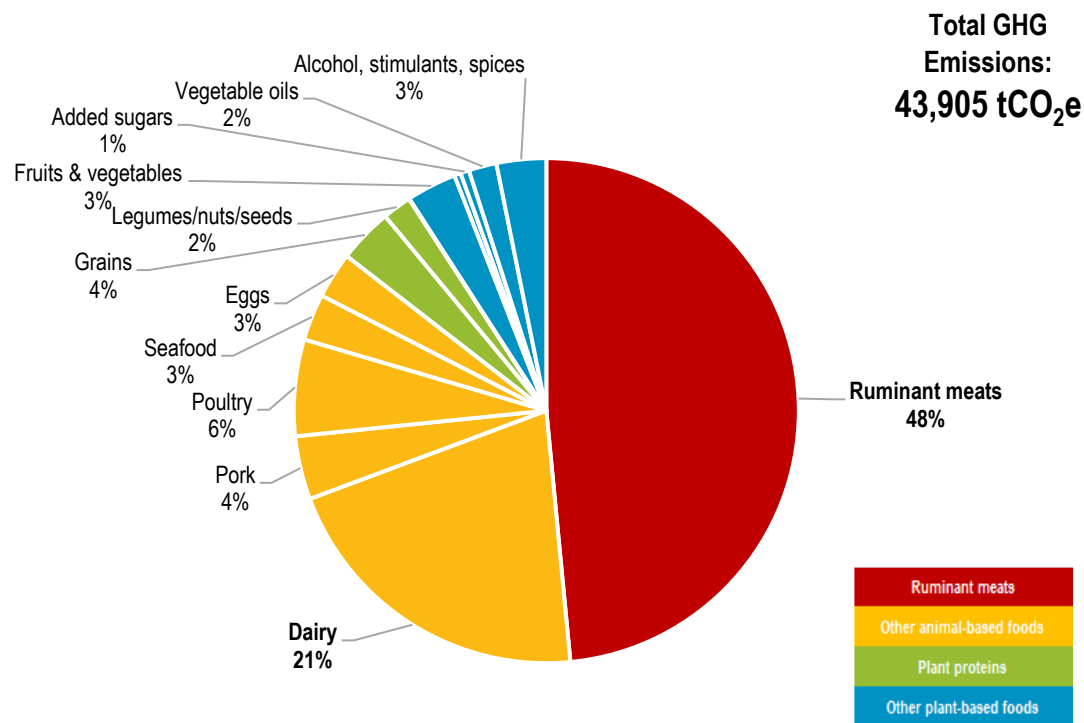


Figure 2: City of Toronto GHG emissions from food purchases in 2022 for three Divisions, CS, TSSS and SSLTC.

Exploration of Emissions Reductions Actions

To determine the actions required to meet the CFP target and determine the City's progress from the food-related emissions reported in the City of Toronto Cool Food Pledge Baseline, the City of Toronto worked with consultants to calculate the City's food-related emissions and costs for 2022 and the first three financial quarters (Q1 to Q3) in 2023. In addition to the emission calculations, potential options were analyzed to determine what meeting Toronto's CFP commitment solely through reducing 51 per cent of beef by weight (purchased in 2022) could look like.

The following are the key insights from the City of Toronto Food-Related GHG Emissions:

- The City of Toronto purchased approximately 3,207 t of food in 2022, which resulted in about 43,905 t CO₂e, a 3.6 per cent decrease from the 2019 baseline year.
- Food purchases and associated emissions for Q1-Q3 of 2023 are similar to those in 2022.
- The City's 2022 food-related expenses totalled around \$15.14 million, with the highest spending on food types such as fruits, wheat/rye products, poultry, beef, milk and assorted vegetables.
- Since beef accounted for the largest portion of corporate food-related emissions at the City, potential options were discussed which directly reduced beef purchases by weight, by at least 51 percent (in reference to 2022). Replacing this amount of beef, in a single year, would reduce food-related emissions by 25 per cent, thereby reaching the CFP target.
- The report examined replacing 51 per cent of beef with different options such as chicken, fish, tofu, and various legumes and pulses to create climate-friendly meals with an equivalent amount of protein. The study showcased various potential pathways that may fulfill the CFP 2030 target and consider the costs of implementing these options.

It should be noted that replacing this quantity, 51 per cent of beef, with 100 per cent plant-based proteins will need to be carefully considered by the Divisions. In particular, SSLTC has found that reductions in beef could pose difficulties in ensuring residents are able to get sufficient protein. Plant-based recipes typically require larger portion sizes to meet protein requirements, and larger quantities can be challenging for residents in long-term care to consume. In addition, plant-based recipes are often not well received by the residents in Long Term Care homes, and lower food intake may lead to negative clinical outcomes.

Additionally, an issue in reducing animal-based foods for Children Services is that children under two years of age should not be given plant-based beverages because they do not have enough fat or protein to meet their nutritional needs. Rather, whole cow's milk (3.25%, also known as homogenized milk) is recommended for children under the age of two years old. Children over two years of age can be given fortified soy beverages.

Further, the City must align its policies and programs with Canada's Food Guide ([2019.HL9.3](#)). Additionally, the City must comply with the food regulations set-out by [O. Reg. 246/22](#) which governs the food served to Long-Term Care residents. Food served in child care settings is subject to standards set out in the Ontario Ministry of Children and Youth Services' Child Care and Early Years Act ([O. Reg. 137/15](#)).

The information presented highlights some of the unique challenges each Division will need to explore moving forward and the reason the options presented in the report represent an exploratory analysis intended to help guide the City towards the next steps in shifting to a more climate-friendly menu, not intended as the recommended course of action.

Different combinations of beef replacement by other proteins (both plant- and animal-based) were used as a starting point to look at some examples of how to reduce food-related emissions at the plate level. The results show that there are many ways to reduce food-related emissions to meet the CFP target. The cost implications of the shift to climate-friendly meals are currently being examined with the City's food vendor and the key City service areas. Some jurisdictions and institutions, such as New York City and their municipal hospital system, have shown that increasing plant-based proteins can result in cost savings,⁷ however it is unclear if this would be the case for Toronto. Analysis and discussions with the City's food vendors and Divisions are currently in progress to get a clearer picture of the cost implications of shifting to more plant-based proteins.

One tangible benefit from this study was the creation of a "calculator" that will enable City Divisions to calculate food-related emissions and allow them to explore different combinations of climate-friendly meals to test potential GHG reduction outcomes and associated costs implications.

Each City Division, with support from E&C, will need to examine how to translate the core study results into practical, healthy, budget- and environmentally- responsible meal plans that meet the unique dietary needs of the populations they serve.

Conclusion

Further research, and engagement of residents receiving services from the City, by E&C, SSLTC, TSSS and CS, along with TPH, PMMD and SDFA, is required to determine how to move forward to meet the CFP target. The calculator developed and used in the study will enable City Divisions with support from E&C to calculate food-related emissions and help guide a shift to climate-friendly meals while considering the dietary needs and food preferences of the populations they serve.

⁷ <https://www.nyc.gov/site/foodpolicy/about/hospital-food.page#:~:text=In%20all%2011%20public%20hospitals,36%25%20reduction%20in%20GHG%20emission.>

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SIGNATURE

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ATTACHMENTS

Attachment A: City of Toronto Food-Related GHG Emissions (2022 and 2023 (Q1 - Q3))