

## City of Greater Sudbury - Climate Action Annual Report 2022

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Prepared by:	Stephen Monet Planning Services
Recommended by:	General Manager of Growth and Infrastructure

### Report Summary

This report and presentation provides an update on the progress made by the municipality in implementing the Greater Sudbury Community Energy & Emissions Plan (CEEP) and the Community Climate Change Adaptation Plan (CCCAP), which together guide the City's climate action.

### Relationship to the Strategic Plan, Health Impact Assessment and Community Energy & Emissions Plan (CEEP)

This report directly meets Objective 3.2 (Develop and Strengthen Strategies and Policies to Mitigate Impact of Climate Change) under the "Climate Change" strategic priority by identifying ways to improve climate resilience of Greater Sudbury's social, economic, built and natural systems and by providing opportunities to reduce Greenhouse Gas (GHG) emissions within our community.

By providing guidance for climate change adaptation and community resilience, the City's climate action meets several of the City's priorities listed under Asset Management and Service Excellence, Economic Capacity and Investment Readiness and Create a Healthier Community. Becoming more resilient to extreme weather events, for example, will require improving infrastructure and enhancing communication between many sectors, especially populations most affected.

Together, the CEEP and the CCCAP provide climate action guidance for the Greater Sudbury community.

### Financial Implications

There are no financial implications associated with this report.

### Background

The United Nations calls climate change "a global emergency that goes beyond national borders. It is an issue that requires international cooperation and coordinated solutions at all levels." To keep global warming to no more than 1.5°C, as called for in the Paris Agreement, greenhouse gas (GHG) emissions need to be reduced by 45% from 2010 levels by 2030 and reach net zero by 2050.

Several hundred municipalities worldwide have joined more than 140 countries in pledging to reach net zero by 2050.

On May 28, 2019, City of Greater Sudbury (henceforth referred to as the “City”) passed resolution CC2019-151 declaring a climate emergency and pledging to reach net-zero by 2050. Since then, the City has approved both a climate change mitigation plan and a climate change adaptation plan. The Community Energy & Emissions Plan (CEEP) outlines 18 goals that must be met to reach the climate emergency’s target of net-zero carbon emissions by 2050.

The United Nations also identifies climate adaptation as an important aim: “Climate change is here. Beyond doing everything we can to cut emissions and slow the pace of global warming, we must adapt to climate consequences so we can protect ourselves and our communities.” Many municipalities have developed climate adaptation plans. On June 13, 2023, the City approved a Community Climate Change Adaptation Plan (CCCAP) that outlines 17 objectives to help Greater Sudbury become more resilient to climate change events such as flooding, heat waves and wind storms.

The City’s Climate Action Annual Report 2022 provides an update on the progress made by the municipality in implementing the CEEP and CCCAP, which together guide the City’s climate action.

## **City of Greater Sudbury - Climate Action Annual Report 2022**

The City of Greater Sudbury has undertaken numerous initiatives aimed at reducing municipal GHG emissions and increasing climate change resilience of municipal facilities, infrastructure and operations. Climate Action Annual Report 2022 (Appendix 1) shows progress in meeting the City’s target of being a net-zero community by 2050. Attaining this ambitious goal will require continued effort from both the community and the municipality. This report reviews the municipal contribution towards meeting the goal. The City’s Climate Action Resource Team (CART) is a coordinated group of City staff representing several municipal service areas and divisions that supports the implementation of the Community Energy and Emissions Plan (CEEP) and the Community Climate Change Adaptation Plan (CCCAP). CART has been an integral part of the development of the Climate Action Annual Report.

Climate Action Annual Report 2022 visually represents several climate and energy related metrics to show progress, successes and challenges from 2021-2022. Energy use and climate actions are expressed in four ways: 1) total amount of energy used by municipal buildings and operations for each of three energy types: electricity, natural gas and liquid fuels (i.e., gasoline and diesel); 2) several metrics directly and indirectly linked to climate change; 3) energy and climate-related accomplishments made in various municipal service areas; and 4) an update on municipal actions that implement the CEEP and CCCAP. This bottom-up approach recognizes that no matter the climate actions undertaken and accomplishments achieved, their influence will always be fundamentally reflected in the total amount of energy consumed, which, in turn, is reflected in the amount of GHGs emitted. Importantly, however, a trend of increasing total energy use by City operations does not necessarily represent a negative outcome. For example, increased transit ridership might require more buses on the road but result in fewer trips by personal vehicle overall. Likewise, enhanced winter sidewalk cleaning might require the consumption of more liquid fuel but result in greater opportunities for active transportation. Furthermore, reduction of GHG emissions is only one of many (at times competing) priorities in the delivery of municipal services.

In Greater Sudbury, municipal electricity use has decreased since 2016 due in part to COVID-19 lockdowns that reduced access to some municipal facilities and to municipal initiatives such as the LED streetlight conversion and upgrades to the Sudbury Wastewater Treatment Plant (Kelly Lake Road), Wanapitei Water Treatment Plant and Pioneer Manor. Maintaining this downward trend in electricity use will require continued upgrades and retrofits to the 500+ City-owned buildings and operating equipment. Given the relatively clean electricity grid in Ontario, reductions in electricity use represent modest reductions in GHG emissions compared to reductions in natural gas and liquid fuels, which emit far more GHGs.

Natural gas consumption has not consistently decreased since 2016. Between 2020 and 2021, however, Pioneer Manor, Carmichael Arena, Gerry McCrory Countryside Sports Complex and the Lorne Street Fleet and Transit Garage have decreased in natural gas consumption due to decreases in heating and cooling demands. A consistent decrease in natural gas use will require dedicated and enhanced financial support for capital retrofit projects.

Liquid fuel use has increased since 2016 despite the addition of several electric vehicles to the City fleet and having a municipal policy aimed at reducing idling times. Causes include the increase in transportation needs of several divisions, including emergency services and law enforcement. Liquid fuel use is also affected by weather (e.g., maintaining winter control service levels for snow and ice removal on roads, sidewalks and municipal parking lots).

The first 5-year CEEP implementation plan, which was brought to City Council in 2020, outlines forty-five (45) projects focused on reducing greenhouse gas emissions. A new 5-year climate action implementation plan is included in Climate Action Annual Report 2022 showing progress of the 2020 climate mitigation projects and is now expanded to include climate resilience and adaptation projects aimed at implementing the CCCAP.

## Conclusion

Several Canadian municipalities are taking note of Greater Sudbury's achievements in climate action. Projects that stand out include the conversion of all streetlights to LED lighting; the electric vehicle uptake, especially for the Community Paramedic Program, which was the first to do so in Canada; landfill gas to electricity program; greening program, which has received international recognition and awards; and the Battery Electric Vehicle conference. A significant impact for the City's sustainability efforts and climate action is its sustained funding of active transportation projects, which continue to provide alternatives to motorized transportation.

While numerous improvements to municipal buildings and operations have been made, overall, the City is not yet on track for reaching net zero by 2050. This situation mirrors the one generally occurring across the globe. Recently the UN stated that commitments made by governments to date fall far short of what is required. "Current national climate plans – for 195 Parties to the Paris Agreement taken together – would lead to a sizable increase of almost 9% in global greenhouse gas emissions by 2030, compared to 2010 levels. To keep global warming to no more than 1.5°C – as called for in the Paris Agreement – emissions need to be reduced by 45% by 2030 and reach net zero by 2050. Getting to net zero requires all governments – first and foremost the biggest emitters – to significantly strengthen their Nationally Determined Contributions (NDCs) and take bold, immediate steps towards reducing emissions now."

As with other municipalities, the City of Greater Sudbury faces many challenges in implementing climate action plans, some of which are within the City's sphere of influence (e.g., investment level, policy) while others are not (e.g., technological advancements, macro trends, federal and provincial funding).

Becoming a net-zero community is an ambitious goal and will require further effort from both the community and the municipality. This report reviews the City's contribution towards the goal and shows that energy and natural gas consumption decreased from 2016 to 2021, however, the downward trend is not continuous. Liquid fuel use increased over the same interval. To have a more consistent and steeper decline in energy use, especially natural gas and liquid fuels (and therefore GHG emissions), the City must continue to integrate climate change action into projects, plans and budgets. In some cases, a shift in technology may be needed to increase the rate of progress, however, more commitment to energy efficient buildings, electric vehicles and renewable energy production is still required.

The City will continue to show leadership in its climate action through the 5-year Implementation Plan that is aligned with many City Council strategic priorities. As shown in the breadth and diversity of the projects presented in this report, climate actions are being undertaken across many municipal service areas.

By integrating climate actions into master plans, regulations and programs, the City can also provide guidance and incentives for residents to help meet the climate action goals for the community as a whole. It is anticipated that future annual reports will include energy and greenhouse gas emission trends for the entire Greater Sudbury community rather than just the municipal operations.

## Next Steps

- Implement a revised climate lens that reflects both climate mitigation and climate adaptation by Q3 2024.
- Continue to work with external data providers to ensure accurate reporting of energy and GHG emission trends.
- Continue to work with staff through the Climate Action Resource Team (CART).
- Continue to develop climate action tracking and reporting systems that offer comparison to other municipalities in Ontario, Canada and globally. In particular, the Global Protocol for Community-scale Greenhouse Gas Inventories (GPC), the model of which was used in the development of the CEEP, will be explored further to determine the appropriateness of the wider system for Greater Sudbury.
- Develop a Sustainable Procurement Policy or Strategy.
- Present the Climate Action Annual Report 2023 to Council in late 2024. This update report will include energy and greenhouse gas emission trends for the entire Greater Sudbury community rather than just the municipal operations.

## Resources Cited

1. United Nations – the Paris Agreement; website - <https://www.un.org/en/climatechange/paris-agreement>
2. United Nations – the Net-zero Coalition; website - <https://www.un.org/en/climatechange/net-zero-coalition>
3. United Nations – climate adaptation; website - <https://www.un.org/en/climatechange/climate-adaptation>
4. IESO, Ontario's Electricity Grid; website - <https://www.ieso.ca/en/Learn/Ontario-Electricity-Grid/Supply-Mix-and-Generation>
5. Resolution CC2019-151, May 28, 2019, <https://pub-greatersudbury.escribemeetings.com/FileStream.ashx?DocumentId=30307>
6. “Greater Sudbury Community Energy & Emissions Plan (CEEP) Implementation: Municipal Action (2021-2025)”, Correspondence for Information Only brought to the December 15, 2020, Council meeting <https://pub-greatersudbury.escribemeetings.com/Meeting.aspx?Id=a0ab1cdc-3da9-4cec-a59b-ae64582e5b7c&Agenda=Agenda&lang=English>