

Standing Committee Report

REPORT NUMBER 032-2026-Growth-Strategy & Engagement

DATE

PREPARED

January 6, 2026

FILE

032-2026

STANDING

COMMITTEE

January 27, 2026

MEETING DATE

SUBJECT

Net Zero Strategy Update 2023-2024

PURPOSE

For information only.

EXECUTIVE SUMMARY

This report provides an update on the third and fourth years of implementation of Climate-Forward City: Thunder Bay Net-Zero Strategy.

Overall, 84% of actions included in the Net-Zero Strategy's (NZS) five-year implementation plan are in progress or complete after four years, demonstrating steady progress towards the City's long-term climate objectives. Two actions are on hold due to human resource capacity constraints. An informal community greenhouse gas (GHG) emissions inventory was completed for 2023 and 2024, which provides an additional set of metrics by which we can measure the impact of climate change policies and initiatives. The streamlined reporting process reveals that energy use and emissions are decreasing, but these changes cannot be attributed to the implementation of the NZS alone.

The Net-Zero Strategy supports the implementation of the Smart Growth Action Plan by advancing energy efficiency, climate resilience, and development practices that contribute to long-term affordability, sustainability, and readiness for growth.

Priority actions for 2026 include funding and implementing a local Home Energy Improvement Loan Program, the roll-out of a Climate Lens framework for Corporate reporting, research and engagement on creating a framework for Green Development Standards, and continued implementation of supporting City plans and strategies.

KEY CONSIDERATIONS

The Net-Zero Strategy (NZS; 2021) responds to the climate emergency by providing a pathway to reduce energy use and greenhouse gas emissions across the community.

The NZS is being implemented alongside other major initiatives, including the Smart Growth Action Plan, to support coordinated, sustainable decision making. This report outlines the progress made during the third and fourth years of implementation.

Status of Action Implementation

The NZS includes a series of near-term (2021-2025) implementation action tables for the Corporation of the City of Thunder Bay (Appendix D, NZS). Attachment A outlines the status of each action included in Appendix D, presented by time-horizon. A summary table is included below (Table 1).

Table 1. Status summary of near-term actions for the City of Thunder Bay.

Time Horizon	Complete	In Progress	Not Initiated	Total
Immediate (2021-2022)	5	2	2	9
Short-term (2022-2023)	8	2	2	12
Medium-term (2023-2025)	1	5	2	8
Ongoing	N/A	9*	0	9
Total	14	18	6	38

* Actions identified as “ongoing” in Attachment A are included as “in progress” for clarity.

Overall, 84% of actions are complete or in progress; a 13% increase from the second year of implementation. As indicated in Attachment A, one immediate action and one short-term action are on hold due to human resource capacity constraints.

Highlights from the third and fourth year of implementation include:

- Home Energy Improvement Loan Design Study:** In April 2023, the City of Thunder Bay was awarded \$220,000 through the Federation of Canadian Municipalities’ Green Municipal Fund (Community Efficiency Financing stream) to complete a Community Efficiency Financing Design Study. The purpose of this study is to provide the early-stage planning and technical analysis needed to advance a municipally supported home energy retrofit financing program from concept to implementation. This initiative directly supports housing affordability, energy efficiency, and emission reduction

objectives. The completed design study was presented to in the Quality of Life Standing Committee on January 27, 2026.

- **Boulevard Garden and Maintenance By-Law:** In September 2024, Administration presented the first report on the Boulevard Garden and Maintenance By-law to City Council. In February 2025, the by-law was ratified, permitting residents to cultivate a wide variety of herbaceous plants and small shrubs in boulevard gardens.
- **Transit and Municipal Fleet Zero Emissions Transition:** In July 2024, Council endorsed a phased approach to transition Thunder Bay Transit and the municipal fleet to electric vehicles. Approving these plans allows the City to access future funding for electric vehicles and supportive infrastructure like charging stations, building on millions of dollars that the City has already secured from other orders of government to begin the transition.
- **Energy Efficient Municipal Facilities:** In 2023 and 2024, the City continued to implement energy efficiency infrastructure within the asset renewal cycle to reduce GHG emissions and overall energy consumption in Corporate facilities. This includes the development of a greenhouse gas reduction roadmap and action plan for all major corporate facilities. Moving into 2026 and beyond, these facility retrofits will be implemented where operationally and functionally viable, using both internal and external funding sources.
- **Carbon Disclosure Project (CDP) Cities A-List Awarded:** In 2023 and 2024, the City was recognized by CDP, a not-for-profit charity that runs the global carbon disclosure system, as one of 122 cities and counties across the globe that are taking bold leadership on environmental action and transparency. 13% of local governments scored by CDP made the “Cities A-List” in 2023, and 15% of local governments scored by CDP made the “Cities A-List” in 2024. The City’s score for 2025 is expected to be released in November 2026.

Quantifying Greenhouse Gas Emissions

Energy use across several categories is used to measure community-wide greenhouse gas emissions and quantify the impact of net-zero actions (see Table 2). A streamlined approach to estimating emissions was selected for the 2023 and 2024 inventory years based on access to data and budget constraints.

Table 2. Streamlined community GHG inventory inputs.

Input	Units	Data Quality	Data Source
Electricity	Kilowatt hours (kWh)	High	Synergy North
Natural Gas	Cubic metres (m ³)	High	Enbridge Gas
Gasoline	Litres (L)	Medium	Kalibrate Technologies Ltd; City of Thunder Bay
Diesel	Litres (L)	Medium	Kalibrate Technologies Ltd; City of Thunder Bay
Propane	Litres (L)	Low	Statistics Canada
Fuel Oil	Litres (L)	Low	Statistics Canada
Solid Waste	Tonnes (t)	High	City of Thunder Bay
Compost	Tonnes (t)	High	City of Thunder Bay

In the table above, each input was assigned a Data Quality value to reflect its ability to provide a representative snapshot of community emissions. Inputs that are assigned “High” Data Quality ratings provide the most accurate reflections, while “Low” Data Quality ratings provide the least accurate reflections.

The results from the streamlined emissions inventory are presented in Table 3. Granular activity metrics are not included in this report due to confidentiality agreements for certain fuel data. Due to a lag in data availability, the 2025 streamlined inventory will be included in the 2026 NZS Annual Report.

Table 3. Community energy consumption and emissions in 2016, 2023 and 2024.

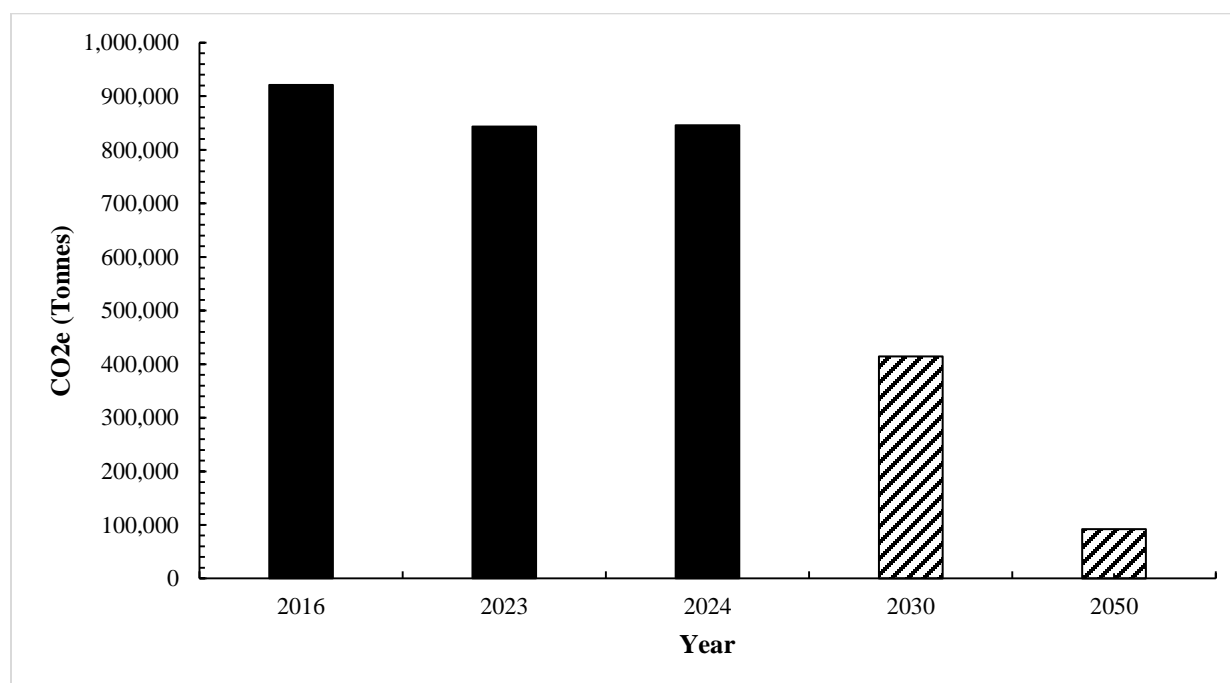
Year	2016	2023	2024
Inventory Type	Formal	Streamlined	Streamlined
Total energy (petajoules)	17.74	15.63	15.37

Year	2016	2023	2024
Energy per capita (gigajoules per person)	164.35	143.61	141.23
Total emissions (million metric tons of carbon dioxide equivalent)	0.92	0.84	0.85
Emissions per capita (tonnes of carbon dioxide equivalent per person)	8.5	7.8	7.8

The Partners for Climate Protection Milestone Tool was used to calculate the streamlined inventories for 2023 and 2024. Formal, comprehensive greenhouse gas inventories were completed in partnership with ICLEI Canada for 2016 and Sustainability Solutions Group for 2021 and are available upon request to the Climate Action Specialist. Data from the 2021 Formal Greenhouse Gas Inventory was omitted because pandemic-affected activity levels from that year do not reflect long-term emissions trends.

The 2023 streamlined inventory reveals a 12% decrease in community energy use and an 8% decrease in total emissions compared to 2016, while the 2024 streamlined inventory reveals a 13% decrease in community energy use and an 8% decrease in total emissions compared to 2016. These values are represented graphically in Figure 1, alongside community emissions targets for the years 2030 and 2050.

Figure 1. Current community energy emissions vs community emissions targets.



The 2030 and 2050 targets reflect 55% and 90% reductions in community emissions from the baseline year of 2016.

While these trends are encouraging, they reflect a combination of local actions and broader influences. External factors, including provincial and federal policy change, increasing weather and climate variability, fuel supply and cost, and recent increases in electrical grid carbon intensity most likely contributed to these decreases too.

Furthermore, the effects of the COVID-19 pandemic continue to influence the 2023 and 2024 emissions inventories. Remote and hybrid work arrangements, changes in commuting and travel patterns, shifts in residential and commercial energy use, and sector-specific economic recovery all affect energy consumption and greenhouse gas emissions. These residual factors result in minor deviations from pre-pandemic trends and should be considered when interpreting year-over-year changes in the community's emissions profile.

Net-Zero Priorities for 2026

The net-zero priorities for 2026 are as follows:

- Begin Phase 3: Home Energy Improvement Loan Program. Fund and implement a local retrofit financing program.
- Continue Green Development Standard Research. Explore legal alternatives to Green Development Standards and their potential impact on the community.
- Coordinate the roll-out of a Climate Lens procedure for Corporate Reporting. This action will require significant staff time and training resources.
- Continue providing internal support on projects and initiatives related to sustainability and climate action.
- Complete and report on the annual community-wide greenhouse gas emissions inventories to satisfy the City's commitments to the Global Covenant of Mayors, CDP, and Cities Race to Zero initiatives.

In addition to the priorities listed above, there are ongoing and upcoming initiatives throughout the Corporation that directly or indirectly support the Net-Zero Strategy, including:

- Source Separated Organics Program [Environment]
- Water System Master Plan Renewal [Environment]
- Climate Adaptation Plan Renewal [Engineering]
- Community Safety & Well-Being Plan Renewal [Strategy & Engagement]
- Smart Growth Action Plan [Growth]
- Existing Plans and Strategies Implementation:

- Active Transportation Plan [Engineering]
- Transportation Master Plan [Transit Services & Engineering]
- Corporate Energy Management Plan [Facilities Services]
- Solid Waste Management Strategy [Environment]
- Fleet Electrification Plan [Facilities Services]
- GHG Reduction Roadmap & Action Plan [Facilities Services]
- Asset Management Plan [Engineering]

FINANCIAL IMPLICATION

There are no direct financial implications associated with this report. Any financial impacts related to climate-related initiatives are addressed through the annual budget process.

BACKGROUND

Climate-Forward City: Thunder Bay Net-Zero Strategy was approved by City Council on June 7, 2021 (Report Number 69-2021) and a community-wide target of net-zero greenhouse gas emissions by 2050 was established.

In January 2020, Thunder Bay City Council declared a climate emergency emphasizing the urgency of addressing climate change. The climate emergency reinforced the need for a plan to provide the community with the information and tools to make decisions that contribute to the decarbonization of Thunder Bay.

In 2019, the City of Thunder Bay received funding from the Federation of Canadian Municipalities – Municipalities for Climate Innovation Program (\$125,000) and the Ontario Ministry of Energy, Northern Development and Mines – Municipal Energy Plan Program (\$89,500) for the creation of a community energy plan. With respect to Report R 88/2019 (Infrastructure and Operations), City Council approved the receipt and expenditure of funding to develop the Net-Zero Strategy (formerly the Community Energy and Emissions Plan).

The CEAP was adopted by City Council in 2008, Report 2008-128 (Environment). The CEAP was updated with the latest iteration – the EarthCare Sustainability Plan, Report 2014.055 – and was part of the City's commitment to reducing greenhouse gas emissions, and functioned as the community's integrated community sustainability plan. The first Annual Report was presented in 2010, Report 2010.002 (Environment).

City Council approved Environmental Policy Number 04-02-02 after reviewing Report 2005.290 (Environment) on December 5, 2005. Two annual reports, Report 2007.027 (Environment) and Report 2008.024 (Environment), were presented to City Council in keeping with the Policy requirements. Report 2008.024 recommended that pending adoption of the Community Environmental Action Plan (CEAP) by City Council, the reporting of the City's Corporate environmental progress become part of the CEAP reporting process.

REFERENCE MATERIAL ATTACHED

Attachment A (Status of Action Implementation)

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REPORT SIGNED AND VERIFIED BY

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Date (01/27/2026)