

2024-2028 Corporate Energy Plan

Executive Summary

The Township of Hamilton understands that energy is a valuable resource and that the efficient use of energy will help manage costs and reduce GHG emissions. The Township operates and maintains 15 facilities, 299 km of road and 17 parks. The Township operations consume a significant amount of electricity and natural gas, with energy costs for 2023 being approximately \$450K. To manage energy consumption, related costs and greenhouse gas (GHG) emissions, the Township of Hamilton, in 2014, developed its first five-year (2014-2018) Corporate Energy Plan.

This report, the **2024-2028 Corporate Energy Plan Summary**, outlines the results of the 2019-2023 Corporate Energy Plan and the measures the Township will undertake over the next five years to reduce energy consumption, related costs and GHG emissions. The primary objective of the Corporate Energy Plan is to manage and reduce municipal energy consumption and the concomitant greenhouse gas emissions and energy consumption.

Legislative Requirements: The Electricity Act

The *Electricity Act, 1998*, O. Reg. 507/18 required all public agencies, including municipalities, to report their energy use and GHG emissions annually, and to prepare and publish energy conservation and demand management plans (Corporate Energy Plans). The plans require senior management approval and must be updated every five years.

Township's 2024-2028 Corporate Energy Plan was presented to the Township's Senior Management Team for review and approval.

Township's Commitment to Energy Conservation

Declaration of Commitment: The Township remains committed to managing and reducing energy consumption and its related environmental impact from its buildings and operations.

Vision: We exercise stewardship in our use of finite energy resources to demonstrate leadership, optimize our delivery of services, and enhance the overall quality of life in our community.

Goals: To continuously improve the energy efficiency of our facilities and processes in order to reduce our operating costs, our energy consumption and related greenhouse gas (GHG) emissions.

Overall Target: Our target is to reduce our consumption of fuels and electricity in all municipal operations every year.

Objectives:

1. Reduce greenhouse gas emissions and ensure the wise use of resources.
2. Demonstrate leadership within the community as to the commitment to energy management and investigation of new and emerging technology.
3. Continue discussions within the Corporation on energy management to be able to explore new ideas and trends.

Organizational Understanding

The total annual energy consumption in municipal operations in 2023 was 3,179 eMWh, and GHG emission of 360 tonnes CO₂e/year.

The Township of Hamilton aspires to show leadership in the promotion and development of renewable energy systems that are compatible with our asset management and land use planning objectives.

Projects Execution

We will carry out the required development of business procedures and communication programs and implement them methodically according to the planned timelines within the resources constraints that apply.

2019-2023 Corporate Energy Plan Results

The 2019-2023 Corporate Energy Plan laid the foundation for energy management in Township's facilities.

- Include an Environmental and Climate Change Impact Assessment for all Council reports.
- Upgraded heating systems to natural gas and propane; no longer using fuel oil (other than Cold Springs Memorial Hall).
- Installation of programmable thermostats and review of bio-fuel and bio-lubricants applications in Public Works.
- Optimize High-Lift Pump operation to use a jockey pump to reduce hydro usage.
- Large vehicles have anti idling devices, where applicable.
- Most diesel engines are equipped with DEF systems which result in less emission from the engine.
- New larger vehicles are equipped with emission control system, which includes diesel particular filter (DPF), diesel exhaust fluid, etc.
- Wash soaps are environmentally friendly.
- Roads are sanded with a sand salt mix, rather than straight salt to reduce sodium chloride along roadside. The salt is also treated enhancing its performance, therefore, melts at a lower temperature and longer lasting.

- Lights in the Public Works garage are LED high efficiency.
- Implemented our last large format vehicle, a pumper/tanker to continue fleet reduction and participated in a County foam bank project focusing on phosphate free soap used for fire suppression.
- Enhanced our personal protective equipment decontamination processes for on scene as well as the cleaning and maintenance.
- Motion activated light switches will be installed in Station #2.
- New Refrigeration Electrical Panel to provide variable speed operation and soft start up to reduce energy consumption will be installed in Bewdley Community Centre.
- The Planning and Development Department launched their public GIS portal, which reduced travel for site visits and paper consumption.

Our energy consumption in 2023 was reduced to 360 tonnes CO₂e/year from our 2019 levels of 431 tonnes CO₂e/year.

2024-2028 Corporate Energy Plan Targets

- Encourage residents to conserve water thereby reducing energy consumption.
- Continue to implement and maintain Drinking Water Standards, Source Water Protection and Risk Management practices.
- Explore Green Building and Farming initiatives, programs, guidelines, best practices, incentives and implement and encourage where applicable.
- With a goal of providing more information to the public electronically, the Planning and Development Department is giving residents an option of staying remote and having a positive impact on the environment.
- Encourage tree preservation / planting, naturalization of applicable areas through investment, promotion, education, and policy development.
- Promote and consider Cycling Master Plans and active transportation during road reconstruction to encourage reduction of greenhouse gases / emissions in the Township.
- Continue to provide public educational activities and communications about environmental protection / conservation, energy conservation, invasive species awareness, etc.
- Encourage, promote, and reduce carbon producing activities by undertaking facility energy efficiency upgrades and investing in Electric Vehicle (EV) Charging Stations.
- Research and implement Climate Adaptation Strategies, where applicable.
- Follow and implement industry best practices to ensure emergency responses minimize impacts to the environment.

- Install reminders in Township facilities and vehicles to conserve energy by turning off lights when not in the room and reduce greenhouse gases by not idling unnecessarily.
- Make upgrades to high-efficiency HVAC systems and LED lighting for increased heating, cooling and lighting efficiency.
- Promote more overlays during road resurfacing rather than full road reconstruction, resulting in less equipment and diesel consumption.
- Creation of a new Environmental Initiative reserve to champion environmental initiatives. The reserve will first fund the implementation plan for updating floodplain mapping. This reserve will fund future projects such as reducing greenhouse gases and carbon footprint. This reserve sets the foundation for a sustainable and eco-friendly Township, fostering a resilient community for the future.
- Work on upgrades to facilities to ensure efficiencies in heating, ventilation and air conditioning systems and create design for dedicated and properly ventilated bunker gear rooms at Station #1 Bewdley and #2 Baltimore.
- Continue researching industry best practices regarding personal protective equipment and steps that can be taken to prevent exposures.
- Enhance policies and best practices for environmental considerations and impacts, where applicable, during the procurement process.

The Township is committed to reducing, by 2030, organizational generated Greenhouse Gas Emissions by 30% less than 2005 levels.

Conclusion

The Township has prepared a 2024-2028 Corporate Energy Plan as required by Ontario Regulation 507/18, under the *Electricity Act*. The primary objectives of the Corporate Energy Plan are to manage municipal energy consumption, cost and greenhouse gas emissions. The Township will achieve this through a series of recommended energy-reducing capital projects together with improved operational practices and organizational measures.

As per the requirements of the *Electricity Act*, the 2024-2028 Corporate Energy Plan Summary will be posted on the Township's website. Staff will be submitting the 2022 and 2023 corporate energy consumption and GHG emissions report to the Ministry of Energy on or before July 1, 2024.