



Energy Management Plan

2019-2024

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1. Introduction

This corporate Energy Management Plan is intended to meet the requirements of the Electricity Act, O. Reg. 507/18 which replaced the requirements of the Green Energy Act, O. Reg. 397/11 (which was repealed on January 1, 2019). The Energy Management Plan (EMP) provides a five year roadmap for energy management in the Township of Guelph/Eramosa. It focuses on the use of electricity and natural gas in Township facilities. The EMP also addresses the workplace culture as it relates to energy conservation.

The plan details the Townships plans to reduce energy and GHG emissions across corporate operations including:

1. Buildings
2. Wastewater Facilities
3. Streetlighting
4. Sportsfield Lighting
5. Workforce culture as it relates to energy conservation

The Township of Guelph/Eramosa is committed to follow the direction of this Action Plan, and will take the necessary steps to ensure its implementation and success.

2. About the Township of Guelph/Eramosa

The Township of Guelph/Eramosa is located at the south end of Wellington County, surrounding the City of Guelph and is a rural and small urban municipality with a population of approximately 13,000. The municipality is rich with stunning landscapes, protected natural areas and a growing network of recreational trails and features which create a unique balance for those who live and work in the Township.

3. Commitment

Declaration of Commitment: Guelph/Eramosa Township will allocate the necessary resources to develop and implement a strategic energy management plan that will reduce our energy consumption and its related environmental impact.

Vision: The Township of Guelph/Eramosa will exercise stewardship in its use of energy resources to demonstrate leadership, optimize delivery of municipal services and enhance the overall quality of life in the communities that form Guelph/Eramosa Township.

Policy: The Township of Guelph/Eramosa will incorporate energy efficiency into all areas of our activity including our organizational and human resources management procedures, procurement practices, financial management and investment decisions, and facility operations and maintenance.

Goals: The Township will continually strive to improve energy efficiency in our facilities and operating procedures that will result in reduction of our operating costs, our energy consumption and reduced production of greenhouse gas emissions.

Objectives: The primary objective of the Energy Management Plan is to meet the requirements of Ontario Regulation 397/11 under the green energy act (2009), and to improve the energy management and performance of the Township of Guelph/Eramosa.

4. Proposed Target

The Township of Guelph/Eramosa plans to maintain the reduction achieved and reported on July 1, 2019 to the Province of Ontario, and reduce it where new technologies become available to achieve further savings.

5. Corporate Operations Profile

The Township of Guelph/Eramosa owns and operates 24 facilities and approximately 750 streetlights. These facilities include our administrative office, fire hall, community centres, operation garages and water and waste water facilities.

6. Renewable Energy

The Township of Guelph/Eramosa 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. As a result, we will investigate the potential to develop solar photovoltaic systems on the rooftops of suitable corporate facilities with sound, south-facing roofs.

7. Energy Leaders:

Guelph/Eramosa Township will clearly designate leadership and overall responsibility for corporate energy management. All directors and the Chief Administrative Officer will sign off on the EMP to demonstrate commitment to implementing the plan.

Robin Milne, Director of Parks and Recreation will be the “Energy Leader” for Parks, Facilities, Cemeteries and Recreation.

Harry Niemi, Director of Public Works will be the “Energy Leader” for facilities and operations relating to Public Works, Water and Wastewater.

8. Energy Plan Review

The municipality will review and evaluate the energy management plan, revising and updating it as necessary on an annual basis, within our corporate planning process. As part of the annual review Department heads will

- Track the activities that have been implemented in their respective departments
- Note any updates to the EMP, based on new audits, organizational or resource changes

- Identify the priority actions for the upcoming year, and secure funding and resources for their implementation

9. Overview of Past and Ongoing Energy Reduction Initiatives

The Township of Guelph/Eramosa has been active in reducing energy consumption throughout its operations, particularly within facilities. Figure 1. presents an overview of completed energy reduction initiatives over the past ten years. Understanding what measures the Township has already taken to reduce energy and GHGs across corporate operations is essential to plotting its future direction.

Figure 1. - Overview of Past and Ongoing Energy Reduction Initiatives

Rockwood Public Library	Lighting retro-fit	2011
Royal Distributing Athletic Performance Centre	<p>New construction of the RDAPC included a number of energy conservation measures during the initial design including:</p> <ul style="list-style-type: none"> • Use of high output T-5 lighting in super structure • Use of T-8, compact fluorescents and LED lighting in remaining of facility • Occupancy sensors in all staff areas • Full cut off dark sky compliant exterior lighting • Use of floor to ceiling glazing in super structure to introduce natural light into the building • R21 sealed cooler panel wall insulation • zero roof penetration with R30 insulation • entrance vestibules • low flow, auto shut-off water fixtures • 98% efficient NG heating • Zoned HVAC system • Zoned lighting system 	2009
	Lighting replacement with LED fixtures	2019

Figure 1. (cont'd) - Overview of Past and Ongoing Energy Reduction Initiatives

Facility Name	Project Description	Year of Project
Administration Centre	Replaced wall switches with occupancy sensors	1999
	Construction of Vestibules at entrances	2013
	Lighting retro-fit, T-12 to T-8, and incandescent to compact fluorescents.	1999
	Zoned and programmable HVAC	2007
Rockmosa Community Centre	Introduced wall glazing to increase the benefit of natural light into the building.	2013
	Installed on/off wall switches on walk in-cooler and bar fridge	2012
	Lighting retro-fit t-12 to t-8's	1999
	Increased flat roof r-value from R5 to R30	2011
	Exit lighting retro-fit to LED	
	Replaced wall switches with occupancy sensors in the bathrooms	2010
	Replaced water heater with a high efficiency water heater	2012
	Replaced roof top HVAC unit with a 98% efficient roof top unit	2010
	Installed programmable thermostats	2007
	Marden Community Centre	Re-insulated the north exterior wall with R30 spray foam
Lighting retro-fit		2008
Exit lighting retro-fit		2007
Installed programmable thermostat		2007
Installed on/off wall switches on bar fridge		2011
Retrofit parking lot lighting from Metal Halide to LED		2012
Rockwood Fire Hall	Bi-Yearly servicing of HVAC systems	Yearly
	Installed programmable thermostat	2012
	Replaced wall switches with occupancy switches	2012
Rockwood (former) Town Hall	Increased ceiling insulation in entire building to R50	2013
	Lighting retrofit from 500w incandescence to high out T-5	2010
	HVAC replacement to 98% efficient heating	2012
	Exterior door replacement with thermo insulated doors	2012
Brucedale PW Yard	Overhead door replacement with insulated doors	2016-2018
Municipal Streetlighting	LED Conversion	2017-2018

10. Summary of energy and GHG reduction initiatives to be pursued by the Township

The Township has identified a number of energy and GHG reduction initiatives to implement across corporate operations to contribute to the Townships reduction target. Each action item is classified as a short, medium or long-term strategy, all action items will be carried out at the discretion of council through the Townships annual budget process. Figure 2. presents the Townships action plan for 2019 through to 2024.

Figure 2. – Action Plan 2019 to 2024

No.	Action Item	Short Term Timeline 1-5 years	Medium Term Timeline 5-10 years	Long Term Timelines 10+ years
1	Add energy awareness to department head meetings to provide a platform to discuss topics like the current cost of energy consumption, the future implications of current usage, areas for improvement and ways to reduce consumption.	Ongoing		
2	Complete LED street lighting conversion program	✓		
3	Develop a plan for communicating energy reduction initiatives with staff and the community	Ongoing		
4	Monitoring and tracking: continue to track and monitor energy consumption through the LAS EPT program and report on progress towards our 5 year target	✓		
5	Enhance the existing procurement policy and integrate environmental purchasing considerations into the policy	Ongoing		
6	Continue to foster an excellent relationship with LAS and continually monitor and apply for incentives and grants related to energy conservation	Ongoing		
7	Continue lighting retrofits in municipal facilities as budget permits	✓		
8	Create annual workplans for each department related to EMP and Directors of each department are held accountable for implementing the workplans.	Ongoing		
9	Carry out existing cost effective energy efficiency LAS 2013 Audit report recommendations	Ongoing		
10	Complete full and thorough energy audits of all remaining municipal facilities	✓		
11	The automation of buildings (“smart” buildings) has grown rapidly in previous years and is expected to become standard for facilities in the future. Energy efficiency measures are easily implemented within building automation systems.	✓	✓	✓
12	Investigate and implement all cost effective energy efficiency projects identified in energy audits of municipal facilities		✓	✓