TOWNSHIP OF SOUTH-WEST OXFORD

Energy Management Plan: 2024 to 2029

A leader in the development and delivery of municipal services for the growth & well-being of our community

Contents

Executive Summary

The updated South-West Oxford Energy Management Plan 2024-2029 continues our commitment to take a leadership role regarding:

- the implementation of new energy technologies;
- energy conservation; and
- achieving our zero-waste goal through education of Council, staff, committees of council and the public in waste reduction and diversion.

The updated plan sets high level goals for the Township over the next five (5) years with action items to be developed annually by the Township's Environment and Energy Innovation Committee with support and implementation through Council and the Senior Management Team.

Vision

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

Policy

We will incorporate energy efficiency into all areas of our activity including our procurement practices, financial management decisions, facilities, equipment, infrastructure operations and maintenance.

Our Commitment

The Township of South-West Oxford Environment and Energy Innovation Committee of Council was created in 2012. The Terms of Reference for the Committee were updated in 2019 to provide that the Committee will:

- ✓ Assist the Township and provide recommendation on taking a leadership role regarding the implementation of new energy technologies and waste reduction and diversion in the community;
- ✓ Encourage incentives for recycling, composting, and reducing the amount of garbage sent to the landfill;
- ✓ Maintain and enhance Township properties with an emphasis on preserving green spaces and allocate funds to keep parks beautiful;
- ✓ Support initiatives from other levels of government that encourage sustainable practices, when reasonable;
- ✓ Encourage water conservation (rain barrels, water meters);
- ✓ Encourage and promote testing of private wells and improve water testing availability for residents;
- ✓ Support and promote air quality testing;
- ✓ Provide comments to Council and staff as the Township replaces and renovates Township owned buildings;
- ✓ Provide comments to Council and staff as the Township replaces fleet;
- ✓ Provide input into the Township budget process to ensure adequate funds are set aside for community education programs and grants;
- ✓ Provide comments to Council and staff on reducing the Township's greenhouse gas emissions;
- ✓ Investigate and promote passive homes;
- ✓ Consider and approve applications from Township Committees for facility improvements which result in the reduction of energy consumption (in keeping with the approved budget by Township Council);
- ✓ To make recommendation to Council for the energy budget annually (by October each year).

Goals

The Township's focus for 2024-2029 is to reduce greenhouse gas emissions by 1.5% per year for the next five (5) years for all Township owned vehicles, equipment and facilities.

To continuously improve the energy efficiency of our facilities and processes to reduce our operational costs, our energy consumption and greenhouse gas emissions. This will result in:

- Reduction in energy consumption
- Greenhouse gas reduction
- Cost savings

To continuously reduce the amount of material going to landfill to reduce greenhouse gas emissions. This will result in:

- Extended life expectancy of the County landfill site;
- Removal of recyclables and organics from the waste stream.

Historic Commitment to Energy Savings

Overall Target

In 2019, the Township set a target to reduce its consumption of fuels and electricity in all municipal operations at an average of 6% over the next three (3) years.

Description	2012 Base	2015 Goal	2019 Actual	2023 Actual	Reduction *(from 2019 Levels)*
Electrical consumption (kWh)	713,883	699,605	437,962	435,508	0.56%
Natural Gas (m^3)	469,461	502,928	723,114	700,604	3.11%
Propane (litres)	-	-	88,852	7,586	91.46%
Heating Oil (litres)	20,695	20,281	218,615	0	100%
GHG	222,054	217,613	165,980	147,416	11%

**Note: most Township facilities transitioned from propane and/or heating oil to natural gas from 2012-2023.*

Description	2014 Usage	2019 Usage	2023 Actual
Regular Gas (litres)	14,454	23,475	27,739
Clear Diesel (litres)	72,761	98,507	98,835
Dyed Diesel (litres)	58,730	61,483	59,344
GHG (MJ)	5,108.07	6,421.27	6,507.13*

**Note: no reduction has occurred as the Municipality has added three (3) (1-ton dump truck, trackless, fire pick-up truck) vehicles to our fleet.*

Objectives: 2024 to 2029

1. Continue to implement energy audit recommendations on all municipal facilities between 2024 and 2029.
2. Reduce total energy consumption in municipal facilities by 1.5% per year for the next five (5) years.
3. Maximize our fiscal resources through direct and indirect energy savings.
4. Reduce the environmental impact of the Township's operations.
5. Increase the comfort and safety of staff and patrons of the Township facilities.
6. Improve the reliability of Township equipment and reduce maintenance.
7. Develop a culture of environmental sustainability.
8. Improve the Township Council and Staff understanding of energy consumption which is essential for us to meet our corporate energy management goals.

9. Continue to educate the public by increasing the energy conservation exhibits at local events.
10. Updating the Township's servicing standards to implement sustainable practices.
11. Consider energy conservation features when completing building repairs or the construction of new facilities.
12. Implement organic waste collection, if adopted by Oxford County, or encourage means of diversion of organic materials from the landfill (e.g., use of green cones and composters).

Organizational Understanding

Summary of Current Energy Consumption

The total energy consumption* in municipal operations for 2023 was 1,141,858.29 ekWH at a cost of $147,416.34 per year and GHG emission of 141,607.98 kg/year eCO2.

*Does not include vehicle fuel consumption.

Implementation of Planning

Consideration of Energy Efficiency for all Projects

We will incorporate life cycle cost analysis into the design procedures for all capital projects.

Factors which influence Energy Consumption

Special events, such as those listed below, may influence energy consumption:

- Unusual weather (i.e. mild winter, hot and humid summers);
- Volume and type of Township construction projects;
- Infilling of street lights;
- Transfer of infrastructure ownership to the Township from the developer of completed subdivisions;
- Closing, renovation or opening a new facility.

Energy Leader

The Township will clearly designate leadership and overall responsibility for corporate energy to management, specific staff and the Energy Innovation Committee.

Staff Resources

The Senior Management Team (SRT) will be responsible for the overall implementation of the energy management plan, particularly, in their respective facilities.

It is important that all staff understand the importance of energy management and that an overall culture of energy efficiency is developed. All staff will have a goal to participate in the Township plan to reduce energy usage by 1.5% each year until 2029.

Communication, awareness and training programs are key components in the overall energy management program and will be undertaken where needed including communication and awareness strategies.

Energy conservation will be included as a standing topic at staff meetings as well as being discussed on a regular basis with Public Works' staff. Staff and local council committees will be challenged to come up with energy savings in facilities as well as staff examining ways to operate vehicles in a fuel-efficient manner.

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

Township Grants for Energy Reduction

South-West Oxford Township Council approves project-based funding as part of the annual Township budget for use by local council committees to help offset the cost of upgrades at facilities to reduce energy consumption. Applications for funding are made to the Energy Innovation Committee for consideration.

Township Grants for Waste Diversion

South-West Oxford Township Council has funding available in the Waste Management Reserve to help offset the cost for containers, advertising and signage to divert organics and recycling from the waste stream, capturing and utilizing of rainwater at Township facilities as well as promotional events held by the Township.

Climate Change Reserve

South-West Oxford Council created a Climate Change Reserve in 2016 and continues to transfer funds to this reserve on an annual basis.

Review Process

Energy Plan Review

The Township of South-West Oxford will review and evaluate our energy plan, revising and updating it as necessary, on an annual basis within our corporate planning process.

Evaluation Progress

Energy Consumption (*sample evaluation)*

Our energy consumption in the year of_____was reduced to _____ from in the year of _____ levels of _____.

Green House Gas Emission

In the year of _____ our corresponding greenhouse gas emissions in _____ are _____ tonnes from natural gas consumption and _____ tonnes from electricity consumption. This represents a ____% reduction over our _____ levels.

Metrics for Green House Gas Emission

Metrics will be developed to quantify GHG emissions per capital.