



Township of
Southwold

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Energy Conservation and Demand Management Plan

2025-2029

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Introduction

[Ontario Regulation 25/23](#): Broader Public Sector: Energy Reporting and Conservation and Demand Management Plans mandates Broader Public Sector (BPS) organizations to develop an Energy Conservation and Demand Management (CDM) plan and update it every five years. Our meticulously crafted and updated CDM plan, developed in strict compliance with the regulation, covers the crucial period from 2025 to 2029. This plan, a testament to our commitment, was approved by The Township of Southwold Council on June 10, 2024, underscoring its importance and relevance.

Our updated CDM plan is a testament to the Township's ongoing commitment to energy conservation and demand management. It builds on the municipality's previous efforts, outlined in the past plan available on the Township of Southwold website, and continues to leverage the experience gained over the last five years. This update supports our transportation and fleet asset plans and incorporates our emissions reduction plans, marking a significant step forward in our energy management journey.

Goals and Objectives

Our goal is not just ours but a collective one. We aim to position our organization with an energy management strategy that aligns with the provincial target to reduce GHG emissions by 20% from 2011 to 2030. Our organization will strive to reduce

energy consumption continuously, manage demand to reduce energy costs, and contribute to an efficient energy system transition. We are committed to creating new partnerships and working hand in hand with other BPS organizations to manage energy use across our community better because we believe that together, we can make a significant impact.

Our organizational energy goals include:

- Exemplify energy conservation leadership within our sector.
- Ensure effective collaboration with our community partners and communicate our energy conservation progress.
- Use this plan to help our organization monitor, evaluate, and measure corporate energy use effectively.
- Review and update Green Fleet Strategy to continue improving the organizational fleet's efficiency.

Our energy conservation and demand management objectives include:

- Enhance overall staff understanding of energy and water conservation.
- Implement building envelope upgrades and energy efficiency retrofits on priority facilities to reduce our overall energy usage and costs.
- Work towards integrating this plan with our Climate Change Action Plan to align our corporate climate and energy initiatives and achieve more significant outcomes.

Our targets towards achieving our goals and objectives include:

- Reduce facilities' energy consumption by 5% over five years (2025-2029) and 10% by 2035.
- Reduce fuel consumption by fleets by 2% and possibly transition 1% of fleet to hybrid/electric vehicles over five years (2025-2029) and reduce GHG by 10% by 2035.

Defining baseline energy consumption and savings to date

This updated plan uses 2018 energy consumption data as a baseline to track the progress of our energy consumption patterns, renewable energy generation, and previous and future energy conservation measures.

Since completing the previous CDM plan update in 2019, we have reduced overall energy consumption across several organizational buildings reported by over 2%.

The greatest reductions were:

- 2.76% reduction in natural gas consumption in the 2019 to 2023 period. (Table 1)
- 7.47% reduction at the Township of Southwold, Administration Office, by following energy-saving tips provided by several online sources. (Table 2)

**See Appendix 2 for the overall Electricity and Gas Consumption for the Township of Southwold 2023.*

Energy use and benchmark performance of operations

Under the regulation, annual energy reporting is required. This allows our municipality to understand how energy is used in our buildings, identify potential energy conservation opportunities, and track progress on energy conservation efforts.

We have included our organization's most recent annual energy report and considered our annual energy consumption information from years prior, which has helped us report on our achievements and inform the development of new measures.

Table 1: Natural Gas Consumption Comparison

Reporting Period	Gas Consumption
2014 - 2018	236937.309
2019 - 2023	230395.828

Table 2: Source Energy Use Intensity (EUI) of office facilities

Property Name	Address	2018 Source EUI	2023 Source EUI	Provincial Median EUI 2022	Change
Southwold Admin Offices	35663 Fingal Line, Fingal ON	44.53 kWh	41.20 kWh	64 kWh	7.47% decrease

Current and proposed energy conservation and demand management measures

Type of Measure: Technical

Conservation Measure: Lighting upgrades at Municipal Buildings

Description: Upgrade from inefficient, original facility lighting to LED.

Cost: \$1700.00

Type of Measure	Conservation Measure	Description	Cost	Anticipated Savings	Project Timeline
Technical	Lighting Upgrades at Municipal Buildings	Upgrade from inefficient, original facility lighting fixtures to high-efficiency LED alternatives	\$1700.00	Estimated cost savings of 75% less energy consumption with bulbs lasting 20-25 years.	Expected completion date of December 2024.

Type of Measure: Behavioral, Technical

Conservation Measure: EV Smart Charging

Description: Installing EV charger capability/roughed-in, panel ready at the new Public Works Building.

Cost: \$1200.00

Type of Measure	Conservation Measure	Description	Cost	Anticipated Savings	Project Timeline
Behavioral, Technical	EV Smart charging	Installing panel-ready EV charger(s) at the new Public Works Building when electric vehicle(s) are introduced to the Fleet.	\$1200	Estimated cost savings of \$300/year (Z kWh off-peak or ultra-low)	Expected completion date of June 2025.

Type of Measure: Organizational

Conservation Measure: Enhance organizational energy management knowledge.

Description: Have a member of staff complete an Energy Certification Training Program that would allow the Township to have a member of staff able to identify and train others in energy conservation techniques and create solutions to energy management concerns.

Cost: \$550 per course

Type of Measure	Conservation Measure	Description	Cost	Anticipated Savings	Project Timeline
Organizational	Enhance organizational energy management knowledge.	Put forward staff member(s) to complete Certified Energy Manager training. Appendix C	\$550.00 per course.	Estimated cost savings of \$550 over 5-year period by reducing reliance on external expertise.	Expected Certification by July 2025.

Renewable Energy Operated by Southwold and Future Plans

Southwold currently does not operate any renewable energy generation facilities.

Southwold harnesses ground-source geothermal energy at 35663 Fingal Line, where the office facilities were renovated and expanded in 2011.

Southwold does not currently harness solar energy and has no plans to do so in the immediate future. However, we will actively investigate this alternative where it is feasible for future consideration.

The Township of Southwold will investigate green energy savings for the Wastewater Treatment Plant while planning a new, more energy-efficient plant. Currently, the wastewater treatment plant uses 56% of the total electricity cost of the Township. See Appendix 1.

Southwold has approved two new facilities, which will be outfitted with energy-efficient lighting and HVAC systems and possibly have charging station(s) to meet the township's needs.

Plan Approval

The Township of Southwold staff is committed to energy conservation and demand management. Council adopted this plan at the June 10th, 2024, Council meeting.

CDM Plan Public Availability

Southwold's CDM plan will be available on the Township of Southwold's website: <https://www.southwold.ca/>.

Physical copies will be made available to the public at the municipal office located at 35663 Fingal Line.

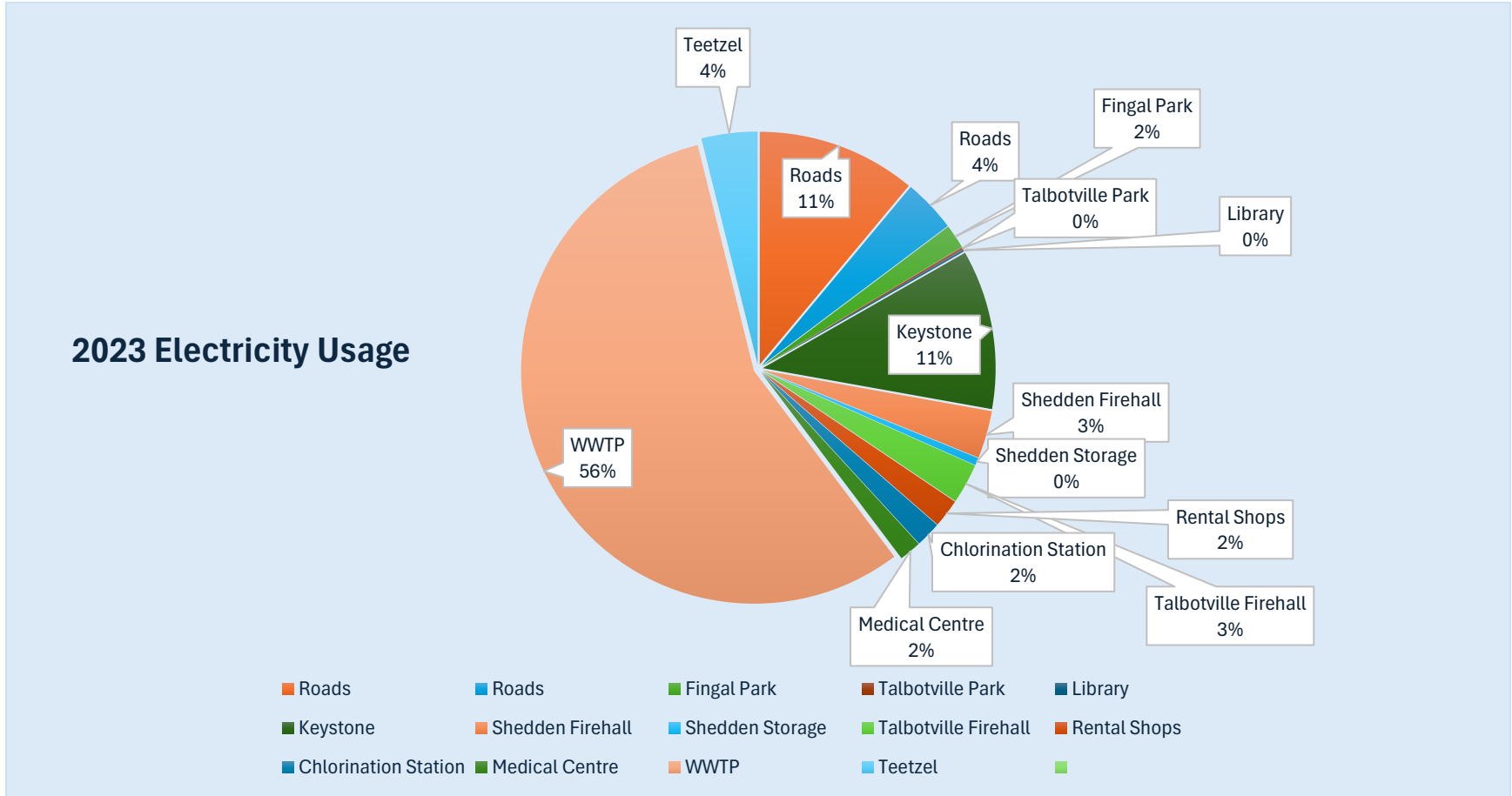
Conclusion

In conclusion, if Southwold pursues the proposed measures, it will be able to achieve the goals of a 10% reduction in energy and greenhouse gas consumption and the promotion of sustainability and conservation for a better future by 2035.

The Township of Southwold expects significant growth over the next energy reporting period, so we are striving to be more responsible and transparent about energy consumption and conservation.

CDM plan updates must be published on or before July 1, 2024, and on or before every fifth anniversary thereafter.

Appendix 1



According to the chart above, the wastewater treatment plant uses the most energy, at 56% of the Town's total usage. With the upcoming developments scheduled to occur within the 2025 - 2029 energy reporting period, the Township is looking at creating a more energy-conscious wastewater treatment facility to decrease energy usage.

Appendix 2

Electricity and Gas Consumption 2023

Electricity Consumption 2023

Appendix 2 - Electricity Consumption 2023													
	TOTAL	January	February	March	April	May	June	July	August	September	October	November	December
Office/roads	59620.5980	7473.0000	7153.0000	1836.0000	3,352.9060	4491.8680	4044.5820	7235.4880	4648.2260	3953.0000	4076.7200	5475.2680	5880.5400
Roads													
Fingal Park	9149.2920	1179.0000	1077.0000	213.0000	272.4480	642.7040	1369.7720	927.9080	839.3760	1045.196	0.0000	555.1160	1027.7720
Talbotville Park	929.5540	0.0000	0.0000	0.0000	0.0000	360.0000	23.0870	540.0000	5.9280	0.0000	0.0190	0.5200	0.0000
Library	812.6122	158.0000	137.0000	24.0000	50.7036	44.5614	32.5398	33.8526	36.7884	33.6378	37.3836	79.6170	144.5280
Keystone	61467.0000	5505.0000	6471.0000	1781.0000	6,091.3600	6186.0400	4889.1200	4936.4000	4713.7600	5009.68	4676.2000	5140.1600	6067.2800
Shedden Firehall	18140.5274	1875.0000	1638.0000	398.0000	1354.9770	1438.4046	1509.0486	1700.7954	1642.7820	1621.8666	1631.1738	1619.7408	1710.7386
Shedden Storage	2894.4318	227.0000	208.0000	57.0000	164.7126	334.8420	241.2456	444.4806	422.8638	146.2308	200.7228	205.4196	241.9140
Talbotville Firehall	15141.9772	1787.0000	1842.0000	456.0000	1,591.1810	1099.0510	1069.0510	1338.4082	1277.7704	1167.532	1265.2536	1043.4960	1205.2340
Rental Shops	10893.7330	916.0000	893.0000	202.0000	585.3192	653.0202	831.4230	1555.4934	1344.5322	926.4972	943.4082	950.0550	1092.9846
Chlorination Stator	9433.6524	1717.0000	1728.0000	359.0000	974.3292	767.7738	212.3784	227.3868	315.1266	388.1064	630.6546	961.2960	1152.6006
Medical Centre	8571.8866	567.0000	582.0000	133.0000	474.3408	806.9826	988.8690	1175.4888	1090.7340	964.881	676.1562	534.5604	577.8738
Farm	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.00000	0.0000	0.0000	0.0000
waste water treater	296782.4627	34048.7640	43877.3880	43370.9087	0.0000	0.0000	32157.8100	24858.1620	23136.9480	24135.174	21774.0240	21906.6660	27516.6180
Teetzel	20138.0000	4920.0000	5160.0000	1980.0000	1,800	480.0000	360.0000	300.0000	300.0000	240	240.0000	979.0000	3379.0000

Appendix 2 (con't)

Gas Consumption 2023

Appendix 2 - Gas Consumption 2023																
	total	Jan 1 - jan 24	jan 25 - feb 2	feb 23 - mar 23	march 24 - Apr 25	april 26 - May 24	may 31 - june 26	june 22 - jul 2	july 22 - Aug 23	aug 24 - Sept 22	sept 28- Oct 30	oct 31 - nov 27	nov 23-dec 20	dec 21-dec31		
office	2/3 8.606	1.455	0.000	2.000	0.000	2.000	0.000	1.000	0.000	1.000	0.000	2.000	0.000	0.606		
Roads office	5.737															
roads shop	12265.213	2256.000	2874.000	2655.000	1330.000	289.000	424.000	149.000	31.000	14.000	272.000	1513.000	1633.000	1081.213		
roads garage	4600.849	741.091	1246.000	884.000	732.000	95.000	0.000	6.000	0.000	14.000	42.000	483.000	744.000	354.849		
Fingal P	15432.490	3354.849	2470.849	1738.849	1643.849	1643.849	1637.849	1637.849	1623.849	1581.849	1098.849	354.849	0.000	0.000		
TV P	44537.564	12961.641	11222.792	9578.943	7935.094	6297.245	4659.396	3035.547	1453.698	354.849	0.000	0.000	0.000	0.000		
Library	540.267	85.819	145.000	142.000	53.000	41.000	6.000	0.000	8.000	7.000	12.000	2.000	104.000	20.267		
Keystone	11502.867	701.819	1103.000	943.000	660.000	471.000	53.000	5882.000	63.000	60.000	509.000	760.000	851.000	147.867		
Sausage 9557B	7606.867	824.728	1341.000	1321.000	640.000	309.000	18.000	1434.000	21.000	19.000	359.000	948.000	1015.000	181.867		
j hairshop 9557	0.000															
medical centre	647.730	96.728	159.000	122.000	67.000	22.000	11.000	0.000	23.000	20.000	28.000	58.000	116.000	21.730		
shedden firehall 9331	11011.134	633.455	1053.000	7354.000	396.000	115.000	35.000	185.000	31.000	28.000	155.000	752.000	763.000	144.134		
shedden storage 9579	2264.800	287.000	341.000	480.000	152.000	316.000	38.000	31.000	46.000	42.000	137.000	325.000	304.000	52.800		
talbotville fire	1557.000	626.000	421.000	373.000	188.000		28.000	0.000	24.000	2.000	127.000	0.000	394.000	0.000		
chlorination station 36513	0.000															
farm	0.000															
office portion	2.869															

Appendix 3

Web-based training can be found at:

<https://saveonenergy.ca/Training-and-Support/Training-Courses>