



Township of Southwold

Energy Conservation and Demand Management Plan

2015-2019

Introduction

Ontario regulation 397/11 requires public agencies to provide information on their annual energy consumption in addition to a Conservation and Demand Management Plan. This is to provide a baseline of energy usage to compare with results from future conservation efforts.

Energy efficiency is something that should be actively pursued and can result in a number of benefits. By utilizing less energy, there will be a smaller environmental impact through a reduction in the release of greenhouse gases, which contribute to global warming. In addition to this there is also the financial impact from purchasing less energy, which results in cost savings.

Southwold consumed 165,939 kWh of electricity and 42,158 cubic meters of natural gas in 2013. Greenhouse gas emissions were 73244 kg in 2012 (2013 figure not available) . These numbers are on par with the three year average (Appendix 1), with the exception of natural gas consumption. The higher than average natural gas consumption can be attributed to the below average temperatures of 2013's winter months.

A full breakdown of Southwold's Energy consumption for 2013 can be found in Appendix 2.

Goals & Objectives

It is difficult to project the future reduced consumption rate; however it is the intent of the municipality to:

- Reduce Overall Energy Consumption 2.5% from the average consumption by 2019
Targets of 159,152 kWh & 32,990 cubic meters
- Reduce Greenhouse Gas Emissions 2.5% from the average consumption by 2019
Target of 72,142 Kg

- Promote sustainability and energy conservation throughout the Municipality
- Township staff is in the process of compiling data on municipal streetlight energy consumption and the plan will be updated when information is available

Proposed Measures

- Replacement of High-Pressure Street Lights with energy efficient Light Emitting Diode Street Lights (Completed in 2013)
- Retrofitting of old light fixtures in municipally-owned facilities with more energy efficient fixtures(as needed)
- Investigate green energy opportunities to improve efficiency and lower carbon foot print(such as solar, wind or geothermal power)
- Replacement of old plumbing fixtures in municipally-owned facilities with low-flow energy efficient fixtures(as needed)
- Energy conservation culture to be encouraged throughout the Township's operations
- Solicit Energy saving ideas from Southwold's Facility users (Fire Department, Roads etc)
- Replacement of , and additions to municipally-owned facilities will consider available grant-related programs and new technology related to energy efficiency.

Cost & Savings Estimates for Proposed Measures

While the Township is planning to reduce its energy consumption, it does not anticipate any cost savings due to projected energy cost increases during the next five years. Energy costs increases should be netted out by conservation efforts.

Timeline

(Present to 2019) Ongoing efforts to conserve energy

(Yearly June) Review results from previous year

(Yearly June) Promote energy conservation to staff via email

(Yearly June) Review Energy saving ideas from staff

(Yearly June) Investigate Green Energy opportunities

(As needed) Record any retrofitting efforts

Renewable Energy Operated by Southwold and Future Plans

Southwold currently does not operate any renewable energy generation facilities.

Southwold currently harnesses ground source geothermal energy at the office facilities located at 35663 Fingal Line. This was implemented during the 2011 renovations and expansion to the facility.

Southwold currently does not harness solar source energy. There are no plans to harness solar energy in the future, but Southwold will actively investigate this alternative for future consideration where they are feasible.

Plan Approval

The Township staff is committed to energy conservation and demand management .This plan was adopted by Council at the June 16th, 2014 Council meeting.

CDM Plan Public Availability

Southwold's CDM plan will be made available on the Township of Southwold's website, www.southwold.ca

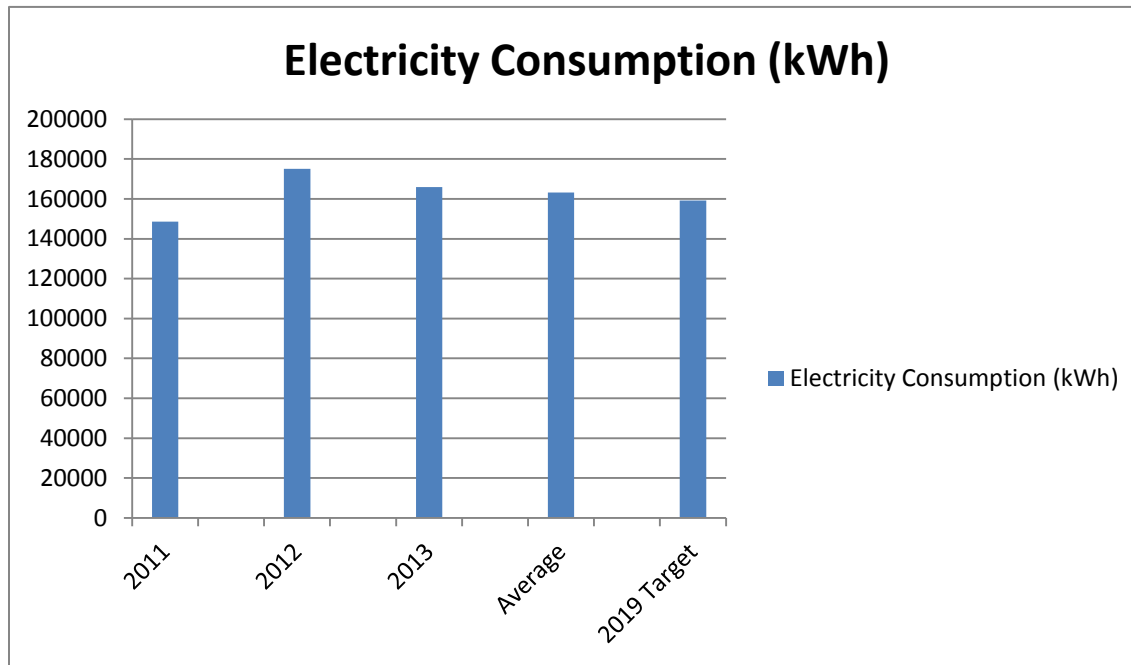
Physical copies will be made available at the municipal office located at 35663 Fingal Line for the public.

Conclusion

In conclusion, if Southwold pursues the proposed measures they will be able to achieve the goals of a 2.5% reduction in energy and greenhouse gas consumption and the promotion of sustainability and conservation for a better future.

Appendix 1 - Historical Results and Future Target

	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>Average</u>	<u>2019 Target</u>
Electricity Consumption (kWh)	148628	175132	165939	163233	159152.2
Greenhouse Gas Emissions (Kg)	74740.8	73244.21	N/A	73992.51	72142.69
Natural Gas Consumption (m3)	29508.49	29844.3	42157.7	33836	32990.1



Natural Gas Consumption (m3)

