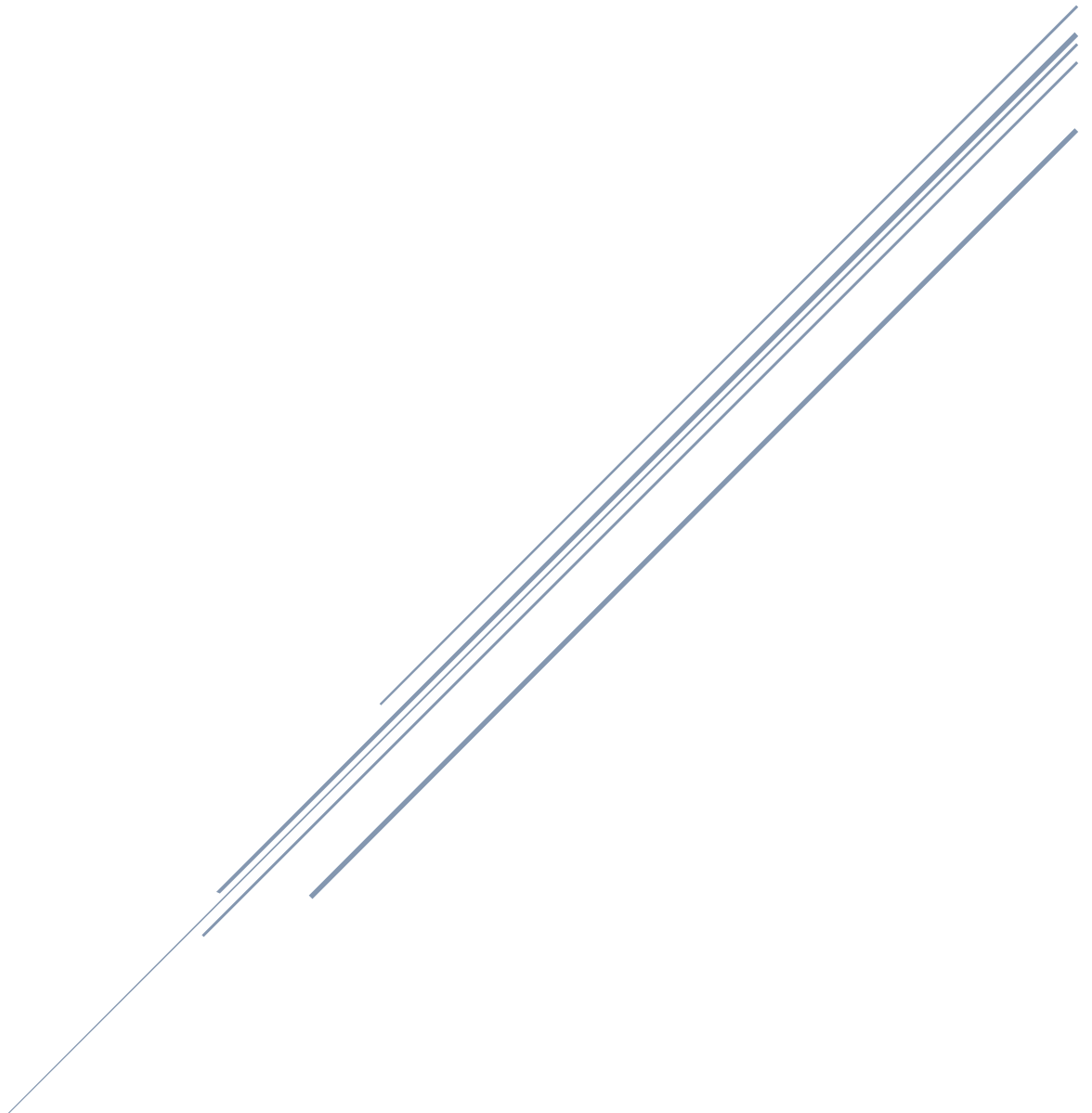


# ENERGY CONSERVATION & DEMAND MANAGEMENT (CDM) PLAN

Township of South Stormont



August, 2019 (Revised: April 22, 2020)

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## Introduction

Under Ontario Regulation 507/18, the broader public sector is required to report annual energy consumption to the ministry as well as implement five-year Energy Conservation and Demand Management (CDM) Plans. The first plan commenced on July 1, 2014 and ran through 2018. The ministry requires an updated version of the plan by July 1, 2019 reflecting on past energy use and greenhouse gas (GHG) emissions and to develop a new and improved plan that looks five years into the future. This plan must be recognized and endorsed by the organization's senior management.

The Township of South Stormont is fully committed to the responsible use of energy within the municipality. Using less energy at municipal facilities implicates that less world resources are being consumed, causing a reduction in GHG emissions. Minimizing pollution and reducing environmental impact is of top priority. In addition, lowering energy consumption within township buildings reduces the cost of purchasing it, consequently leaving more funds available in the budget to improve other important assets in the community.

## Vision

Wherever possible, the township will reduce energy usage and GHG emissions to the best of their ability. This can be improved upon on many different levels, ranging from simply turning off computer monitors to larger commitments such as capital investments. Integrating energy efficient modern technology into municipal buildings will also continue to make an impact. These efforts will be made all while maintaining the many services the township offers to its residents and the public.

Commitment from Township Council will demonstrate the leadership required to ensure the fulfillment of this energy management plan by all energy consumers. Employees within the township will be held accountable and will also be responsible for incorporating wiser use of energy.

## Goals

Based on this proposed plan, the township believes that the following goals are attainable within the next five years:

1. Assuming stable growth in the township, reduce total energy consumption in some buildings while trying not to increase in others because of higher demand.
2. Reduce GHG emissions.
3. Reduce the overall impact that the township has on the environment.
4. Spend an equal amount or less money on buying energy, depending on their going rates.
5. Improve upon township equipment and technology, increasing energy efficiency and lowering maintenance costs.
6. Provide township employees with the proper training and understanding of their energy consumption on a day-to-day basis.

7. Ensure that this energy management plan reaches as many people as possible to demonstrate the township's dedication to lowering their environmental impact.

### Targets

As stated above, one of the main goals is to maintain a flat or declining energy consumption rate at buildings that are affected by municipal growth and decrease in all other buildings where possible. However, the township continues to expand consistently and it is understandable that reductions in every category (electricity, natural gas and propane) may not necessarily occur. As more and more residents hook onto municipal water and sewer, more and more electricity is needed at the water pumping and treating stations in order to keep up with the demand. This is reflected in Table 1 below:

Table 1: Average Electricity Increase per Year between 2013 and 2017

Facility	Electricity Used 2013 (kWh)	Electricity Used 2014 (kWh)	Electricity Used 2015 (kWh)	Electricity Used 2016 (kWh)	Electricity Used 2017 (kWh)	Average Increase per Year (kWh)
Long Sault Sewage Lift Pump	37,054	28,188	26,186	40,493	45,450	2,910
St. Andrews Water Booster	26,200	28,895	29,927	30,729	34,818	1,907

Because of this situation, there will be no concrete goals put in place for each individual building. The best effort will be made at each facility to conserve and reduce energy as much as possible.

### Objectives

There are a number of objectives the township is implementing to ensure the goals will be met. These strategic objectives are as follows:

1. Energy statistics for all township facilities/operations will be collated and analyzed annually.
2. Awareness, knowledge, and understanding of energy savings will be given to employees, through periodic meetings and consistent reminders.
3. Department directors will be appointed as overseers in implementing the energy plan. All employees will work together and cooperate towards the greater goal of saving energy.
4. Sound operating and maintenance practices will be demonstrated to complement the energy efficiencies implemented through the capital asset renewal program.
5. Quarterly discussions on energy management will occur to be able to explore new ideas and trends when it comes to energy savings.

- New and improving technology that can be incorporated to ensure greater energy efficiency will be investigated.

## Municipal Energy Requirements

The three types of energy that the township relies on are: electricity, natural gas and propane. The West Garage was heated by oil until 2013 when it made the switch to propane. Since then, no buildings have made any energy changes and none are planned in the near future.

### Electricity

Every municipal facility operates on electricity. A working knowledge and awareness of its cost and usage is imperative in order to maintain proper usage and mitigate cost.

In Ontario, electricity patrons pay time-of-day prices for their usage. These prices and time periods are based on provincial demand and how/where the electricity is being produced. The three different time periods where electricity rates vary are:

- Off-peak – When demand is the lowest. This period occurs throughout the night and on weekends/holidays when human activity throughout the province is minimal.
- Mid-peak – When demand is moderate. This period occurs during the daytime but not during the busiest time of day.
- On-peak – When demand is at its maximum. This period occurs at times when most people are working, cooking, or when heating/cooling systems are being fired up.

The current rates for the different peak prices can be found below in Figure 1.

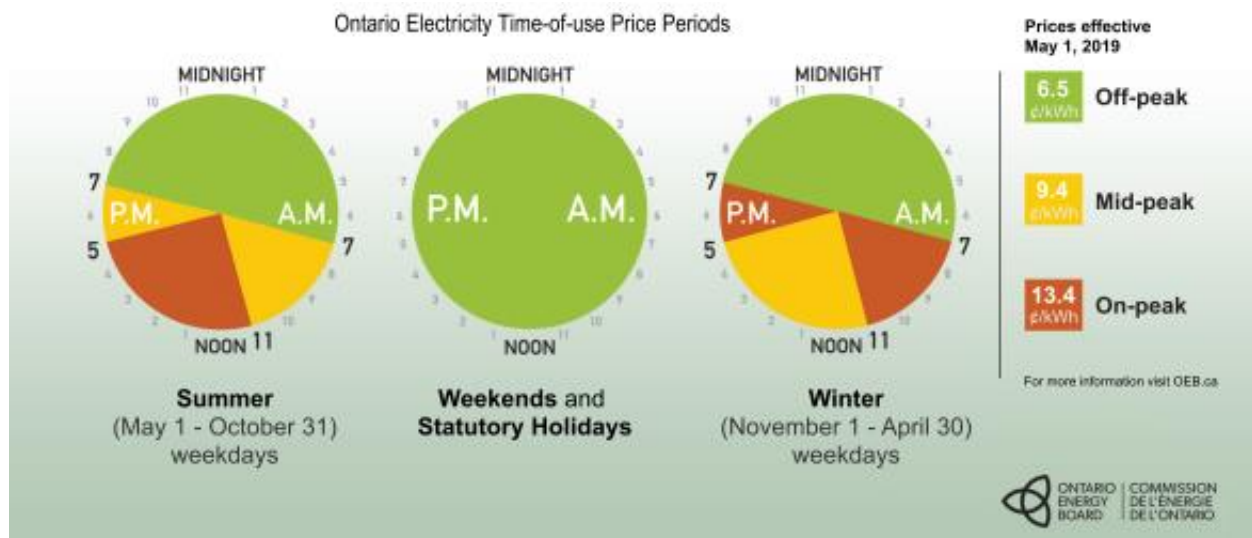


Figure 1: Electricity Rates and Peak Hours (Ontario Energy Board)

### Weekends and Holidays

On all weekends and holidays recognized in Ontario, off-peak prices take effect. Although some township buildings such as Town Hall and both garages are not generally used on weekends,

many buildings are run 24/7. Because of the lower price of off-peak electricity, it is actually more optimal to run large electricity consumers such as the water treatment plants on weekends.

### Summer Months

From May 1 to October 31 of every year, summer peak-time periods come into effect for weekdays. During these months, off-peak rates occur during the night. Mid-peak rates happen during mornings and evenings while on-peak rates are effective during the middle of the day. In terms of cost per usage, this is when it is the most expensive for the township to operate during business hours. Refer to Figure 1 for a better visual.

### Winter Months

Winter weekday rates are effective beginning on November 1 and ending on April 30. The off-peak rates remain the same as the summer hours, but the mid-peak and on-peak rates become the opposite. Mid-peak rates occur during the middle of the day while on-peak rates come into effect during mornings and evenings. In terms of cost per usage, this is when it is the cheapest for the township to operate during business hours. Refer to Figure 1 for a better visual.

### Natural Gas

Most township operating facilities consume natural gas. Understanding its usage and cost within the municipality allows for better management of the product.

Unlike electricity, natural gas rates fluctuate often and sometimes drastically and unpredictably. Prices are generally adjusted four times per year, January 1, April 1, July 1 and October 1, but can never be predicted too accurately (Ontario Energy Board, n.d.). This is due to the fact that many factors play a role in the price. Supply, demand and even major weather events have an influence because of transportation purposes.

The current natural gas rates, as of April 1, 2019, can found in Table 2 below:

Table 2: Natural Gas Rates (Ontario Energy Board)

<i>Company</i>	<i>Price (¢/m<sup>3</sup>)</i>
<i>Union Gas*</i>	<i>17.1237</i>
<i>Enbridge Gas</i>	<i>11.9034</i>
<i>EPCOR Natural Gas Limited Partnership**</i>	<i>17.4366</i>

\*Includes transportation charges

\*\*Includes storage and transportation charges

## Propane

Propane is used at only three of the township's operating facilities; Station 3 (Newington Fire Hall) and the east and west Public Works garages. Similar to the other two types of energy, it is important for the municipality to consume propane wisely and to mitigate usage and hence its cost.

The price of propane varies from region to region and it fluctuates on a regular basis as well. The distance between consumers and the sources of supply is a major determinant of propane prices due to transportation costs. Most Canadian propane is produced in Alberta, whereas its demand is mainly in Ontario. Because of this, prices are generally lower in Alberta and higher in Ontario due to the amount of transportation required (National Energy Board, 2013). To ensure the township receives competitive pricing, the township tenders the supply of propane.

Propane consumption within the township is not expected to change too drastically in the near future. No buildings are expected to switch over to propane in the next five years. As it is only used at three locations, consumption of propane ultimately depends on how long and cold future winters end up being.



## Recent Municipal Energy Consumption

### Electricity Consumption

Table 3: Electricity Consumption (kWh)

Facility	2013	2014	2015	2016	2017	Average Difference/ Year
Arena	486,720	534,960	495,237	492,480	531,840	4,776
East Garage	80,940	100,637	130,823	81,344	77,280	-2,661
EMS Building	-	-	-	3,488	8,338	4,850
Ingleside Sewage Lift Station	118,680	158,428	138,454	173,606	171,840	12,150
Ingleside Waste Water Plant	830,160	1,269,890	1,152,246	1,268,871	1,191,120	72,090
Ingleside Water Booster	162,720	227,904	319,827	271,701	234,480	18,732
Ingleside Water Tower	9,454	6,688	3,372	7,175	7,677	-307
Library-Ingleside	35,478	44,840	42,258	31,526	34,397	-1,548
Library-St. Andrews	6,646	8,196	8,129	5,987	4,003	-750
Long Sault Sewage Lift Pump	37,054	28,188	26,186	40,493	45,450	2,910
Long Sault Waste Water Plant	488,520	513,831	509,437	467,520	456,750	-10,985
Long Sault Water	7,296	7,080	7,080	7,080	6,649	-129
Long Sault Water Treatment Plant	760,320	1,042,497	1,250,793	1,404,593	1,070,880	98,322
Newington Water	30,866	34,869	48,073	38,615	36,277	1,457
OPP	206,800	236,102	232,703	253,393	222,235	4,816
St. Andrews Booster Station	26,200	28,895	29,927	30,729	34,818	1,907
St. Andrews Water Tower	22,773	26,981	23,230	24,826	25,398	310
Station 1/Library-Long Sault	38,633	43,287	41,674	35,359	40,551	-409
Station 2	14,745	12,539	9,153	9,661	10,388	-1,159
Station 3	21,306	21,113	22,225	21,909	17,252	-731
Station 4	20,629	20,901	19,978	20,015	14,520	-1,310
Station 4 - NEW	-	-	-	-	13,590	N/A
Town Hall	219,300	154,573	148,043	154,864	137,368	-16,357
West Garage	3,420	1,992	1,992	1,992	2,188	-246
<b>TOTAL</b>	<b>3,628,660</b>	<b>4,524,389</b>	<b>4,660,840</b>	<b>4,864,547</b>	<b>4,395,289</b>	<b>185,610</b>

## Natural Gas Consumption

Table 4: Natural Gas Consumption (m<sup>3</sup>)

Facility	2013	2014	2015	2016	2017	Average Difference/Year
Arena	34,180	39,094	42,997	37,341	42,476	1,484
East Garage	0	0	0	0	0	0
EMS Building	-	-	-	547	1,979	1,432
Ingleside Sewage Lift Station	0	0	0	0	0	0
Ingleside Waste Water Plant	11,514	23,415	26,028	42,599	32,495	6,115
Ingleside Water Booster	1,906	2,763	2,117	2,388	3,139	209
Ingleside Water Tower	0	0	0	0	0	0
Library-Ingleside	1,085	698	645	686	1,542	90
Library-St. Andrews	10,972	7,876	7,607	6,682	5,981	-1,118
Long Sault Sewage Lift Pump	378	335	449	330	350	-6
Long Sault Waste Water Plant	29,918	40,993	31,487	30,804	31,886	-625
Long Sault Water	3,124	3,183	6,917	4,275	2,137	-88
Long Sault Water Treatment Plant	50,547	38,455	43,965	51,297	52,263	1,627
Newington Water	0	0	0	0	0	0
OPP	14,254	13,540	12,723	12,527	9,640	-1,024
St. Andrews Booster Station	0	0	0	0	0	0
St. Andrews Water Tower	0	0	0	0	0	0
Station 1/Library-Long Sault	6,690	7,026	6,667	5,147	5,833	-359
Station 2	4,022	4,672	4,601	4,152	4,069	-43
Station 3	0	0	0	0	0	0
Station 4	7,649	8,512	7,728	7,575	7,884	-47
Station 4 - NEW	-	-	-	-	3,717	N/A
Town Hall	11,376	10,011	7,626	7,982	10,804	-317
West Garage	0	0	0	0	0	0
<b>TOTAL</b>	<b>187,615</b>	<b>200,573</b>	<b>201,557</b>	<b>216,510</b>	<b>216,195</b>	<b>7,092</b>

## Propane Consumption

Table 5: Propane Consumption (L)

Facility	2013	2014	2015	2016	2017	Average Difference/Year
Arena	0	0	0	0	0	0
East Garage	25,780	25,834	18,408	24,046	21,539	-66
EMS Building	-	-	-	0	0	
Ingleside Sewage Lift Station	0	0	0	0	0	0
Ingleside Waste Water Plant	0	0	0	0	0	0
Ingleside Water Booster	0	0	0	0	0	0
Ingleside Water Tower	0	0	0	0	0	0
Library-Ingleside	0	0	0	0	0	0
Library-St. Andrews	0	0	0	0	0	0
Long Sault Sewage Lift Pump	0	0	0	0	0	0
Long Sault Waste Water Plant	0	0	0	0	0	0
Long Sault Water	0	0	0	0	0	0
Long Sault Water Treatment Plant	0	0	0	0	0	0
Newington Water	0	0	0	0	0	0
OPP	0	0	0	0	0	0
St. Andrews Booster Station	0	0	0	0	0	0
St. Andrews Water Tower	0	0	0	0	0	0
Station 1/Library-Long Sault	0	0	0	0	0	0
Station 2	0	0	0	0	0	0
Station 3	6,673	7,636	8,151	7,704	8,764	-183
Station 4	0	0	0	0	0	0
Station 4 - NEW	-	-	-	-	0	0
Town Hall	0	0	0	0	0	0
West Garage	14,072	16,112	15,958	13,789	15,050	2,121
<b>TOTAL</b>	<b>46,525</b>	<b>49,582</b>	<b>42,517</b>	<b>45,539</b>	<b>45,353</b>	<b>1,873</b>

## Consumption Trends

On average, total township energy consumption has increased from year to year. In all the categories of electricity, natural gas and propane, usage has seemed to steadily increase. That being said, some specific buildings have fared better than others. For example, the Long Sault Wastewater Plant has seen a steady decrease in electricity consumption while the Ingleside Sewage Lift Station has seen a slight increase. Consumption of Natural Gas and Propane largely depends on the length/temperature of the winter that year. This is a possible reason for changes concerning those two types of energy.

According to the township's last CDM Report in 2014, a 5-10% energy reduction goal was established. Reflecting on the data in the three tables above, it is evident that this goal was not reached every year or even as a whole. For this reason, the goal put in place by this report will be to reduce consumption or maintain a flat consumption rate as much as possible.

## GHG Emissions Report

Table 6: Greenhouse Gas Emissions (kg of CO2)

Facility	2013	2014	2015	2016	2017	Average Difference/ Year
Arena	101,618	95,316	101,372	88,105	89,506	-3,144
East Garage	45,879	43,836	33,671	39,946	34,528	-2,659
EMS Building	-	-	-	1,158	3,886	2,728
Ingleside Sewage Lift Station	9,021	6,339	5,614	6,171	2,972	-1,226
Ingleside Waste Water Plant	84,871	95,079	95,931	125,645	82,040	2,490
Ingleside Water Booster	15,972	14,342	16,971	14,173	9,991	-1,213
Ingleside Water Tower	719	268	137	255	133	-118
Library-Ingleside	4,748	3,114	2,933	2,418	3,510	-317
Library-St. Andrews	21,249	15,219	14,712	12,846	11,377	-2,212
Long Sault Sewage Lift Pump	3,531	1,761	1,911	2,063	1,448	-386
Long Sault Waste Water Plant	93,697	98,061	80,187	74,858	68,185	-7,423
Long Sault Water	6,461	6,301	13,365	8,334	4,155	-258
Long Sault Water Treatment Plant	153,359	114,415	133,839	146,914	117,334	-3,955
Newington Water	2,346	1,395	1,949	1,373	628	-346
OPP	42,668	35,046	33,490	32,691	22,070	-4,355
St. Andrews Booster Station	1,992	1,156	1,213	1,092	602	-284
St. Andrews Water Tower	1,731	1,080	942	883	439	-278
Station 1/Library-Long Sault	15,585	15,015	14,294	10,988	11,729	202
Station 2	8,725	9,335	9,070	8,193	7,873	-285
Station 3	11,902	12,612	13,462	12,651	13,804	384
Station 4	16,029	16,929	15,421	15,033	15,157	-364
Station 4 - NEW	-	-	-	-	7,263	N/A
Town Hall	38,177	25,112	20,421	20,596	22,803	-3,526
West Garage	21,945	24,908	24,672	21,319	23,230	-102
<b>TOTAL</b>	<b>702,226</b>	<b>636,639</b>	<b>635,575</b>	<b>647,706</b>	<b>554,662</b>	<b>-28,406</b>

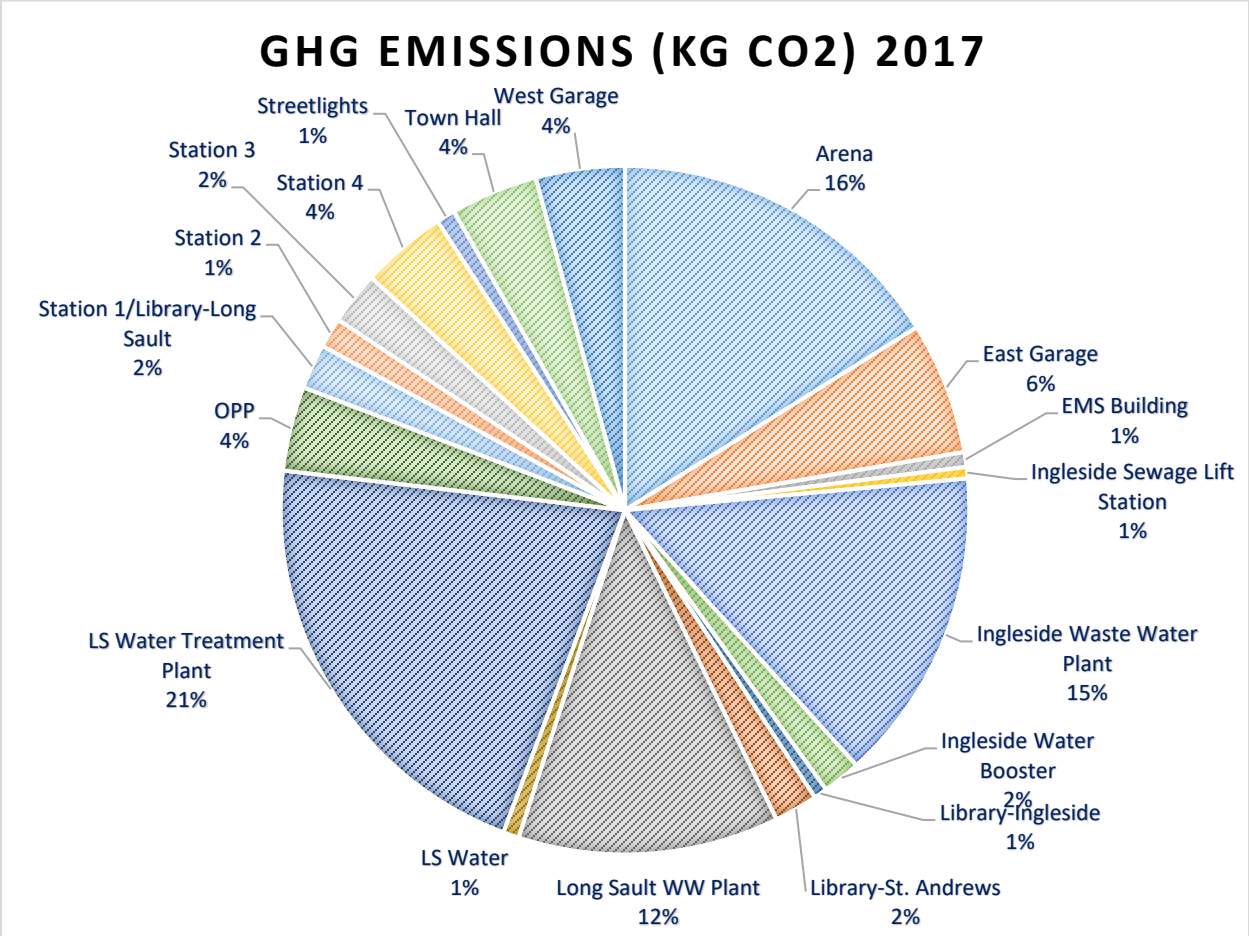


Figure 2: Greenhouse Gas Distribution (2017)

Figure 2 represents the percentages of greenhouse gas emissions by each township facility in the year of 2017. The Long Sault Water Treatment Plant was the largest contributor at 21% while the Arena, Ingleside Waste Water Plant and Long Sault Waste Water Plant also made up a significant portion. The St. Andrews Water Tower, St. Andrews Booster Station, Newington Water, Long Sault Sewage Lift Pump and Ingleside Water Tower also contribute, but not enough to be visible in the diagram.

### Past Initiatives

Over the past five years, many buildings have seen renovations and upgrades involving the retrofitting of older systems. Wherever possible, the township has always sought opportunities to cut back on utilities when implementing new features. Newer technology is typically made with the purpose of being more energy efficient as well.

## Long Sault Arena

The Long Sault Arena has undergone some major changes both technically and operationally. The refrigeration plant has seen some significant changes with the goal of reducing the intake of natural gas as well as municipal water. Updates to dehumidifiers as well as arena lighting have contributed to the reduction of electricity.

The largest improvement was made in 2014 with the installation of the CIMCO seasonal controller. This piece of equipment allowed the entire plant, including the refrigeration unit and compressors, to reduce its hours of operation from 18 hours per day down to 12. As these equipment are by far the largest energy consumers in the facility, a 6 hour operation time reduction allowed for large savings in hydro.

In 2017, the township extended its ice rental season by 5 extra weeks. Instead of taking the ice out in late March, it was taken out after the first week of May. This caused the arena's energy consumption to spike, but not for a lack of reason. Not only did the arena operate for an extra 5 weeks, it operated in warmer weather – causing the facility to require more energy to maintain proper temperatures within the arena.

## Streetlights

Up until recently, streetlights within the township contained high pressure sodium (HPS) lamps. These lamps have been viewed as the best street-lighting option for decades because of their ability to illuminate over a vast area. Despite this, they have the worst colour rendering on the current market, making objects appear shadowy. They also require a brief warm up period of about 5-10 minutes before illuminating to full capacity. Their most inefficient characteristic is that they illuminate in 360 degrees. This causes about half of the light emitted to be wasted if there is not a proper reflection mechanism towards the desired area being illuminated.

HPS lamps have since been replaced in streetlights by LED lights. They offer much better lighting in terms of colour, as objects tend to appear as they should. LEDs also have an excellent lifespan, meaning replacements are not needed nearly as often. They also offer 180 degree lighting, making them more directional than HPS lamps. Less light is wasted trying to deflect light towards the desired area (Griffith, 2019).



Figure 3: LED vs HPS Streetlights (LED Street Lights, n.d.)

Streetlight electricity consumption only began to be estimated in 2017 following the implementation of the LEDs. This estimated number, represented in kilowatt hours (kWh), was 283,912. In theory, this usage should not vary year-to-year unless new streetlights are implemented or some streetlights are burnt out.

### St. Andrews Fire Hall

The construction of a new Station 4, in St. Andrews West, began in 2017 and was recently completed in the second half of 2018. The kitchen, meeting room, apparatus floor, offices and bathrooms were all equipped with high-quality technology with the goal of using less energy than the old building. Some of the notable differences in these rooms compared to its predecessor include: low-flow toilets, energy efficient windows and insulation, kitchen appliances, LED lighting, a programmable thermostat and, most importantly, a state-of-the-art Heating, Ventilation and Air Conditioning (HVAC) system. This system is compact, energy efficient and it does its job effectively. When the 3 large garage doors open up and let the trucks out, the system kicks on instantly in order to regulate the temperature in the building. On top of this, the system is designed to ventilate carbon monoxide, an invisible and deadly gas produced by the trucks, when its concentration reaches a certain amount. This was an important aspect pertaining to the health and safety within the facility. The new fire hall can be seen in Figure 4 below.



Figure 4: Brand New Station 4 (St. Andrew's West)

### East Garage

Although it will not show in the data contained in this report, the lighting fixtures at the east garage were all replaced with LEDs in 2018. A difference should be noticed in electricity consumption when it comes time for the next report.

## Proposed Measures

Many behavioural practices can be implemented by township staff in order to ensure that a conscious effort has been made to reduce energy consumption. Some of these measures include:

1. Turning off the lights when not needed. This not only saves energy, but lengthens the lifespan of both the lightbulb and the lamp.
2. Taking advantage of natural daylight. Turn off or dim the lights when natural lighting is sufficient.
3. Ensuring outdoor lighting is turned off during the day.
4. Trying to avoid using energy during peak hours when demand is high.
5. Turning off computer monitors when leaving the room and turning off the entire computer at the end of each day.
6. Programing thermostats to run only at specific times, when needed the most (How to Lower Your Small Business Electricity Bill, n.d.).

In terms of fuel management, specifically pertaining to the Public Works department, it is important for employees to be conscious when it comes to fuel consumption. Unnecessary idling of township vehicles can always be improved upon. For example, trucks should be turned off when stopping for longer than a few minutes at a time. Although vehicular fuel consumption is not reported to the ministry, it is still an important issue to be dealt with.

## Projects

A simple project that is projected to be implemented in some municipal buildings is the implementation of programmable thermostats. A couple of the newer buildings, Town Hall and the OPP building, both already contain programmable thermostats. This is likely one of the reasons why electricity usage in both buildings has seen a decrease.

## Capital Investments

Although no capital investments have yet been approved for the next 5 years, the township has recognized a couple of facilities in need of significant upgrades. These buildings being the Ingleside Fire hall and, more importantly, the Ingleside Wastewater Plant that has reached its capacity. Preparations are already in the works for when/if senior management and council agree to pursue either one of these projects.

### Ingleside Wastewater Plant

The Ingleside Wastewater Plant services mainly the village of Ingleside, including a large cheese production facility recently taken over by Parmalat. It was commissioned in 1997 and, recently, the plant has reached its functional capacity signalling the need for an upgrade. EVB Engineering submitted a report to the township in 2017 recommending the following measures for the update and expansion of the wastewater facility:



- Upgrades to the Raw Sewage Pumping Station to facilitate the design hydraulic loadings for the expanded plant.
- New headworks, including redundant automated screens and vortex grit removal.
- Implementation of the Conventional Activated Sludge process includes:
  - Construction of two new primary clarifiers
  - Retrofit of the existing aerobic digesters for use within the conventional activated sludge design parameters
  - Retrofit of the existing secondary clarifiers as flocculation tanks with the ability for alum and polymer addition
  - Construction of two new secondary clarifiers
- Construction of a new UV disinfection system.
- Construction of a gravity settler to pre-thicken waste activated sludge ahead of the aerobic digesters.
- Expansion of the existing aerobic digesters.
- Expansion of the existing biosolids storage facilities.

Building expansion to house the support systems: blowers, pumps, chemical feed systems, emergency power systems, etc. (EVB Engineering, 2017).

### Ingleside Fire Hall

Ideally, the Ingleside Fire Hall (Station 2) will soon be demolished and replaced. Being constructed in 1973, most of the fixtures and appliances are extremely outdated and consume unnecessary amounts of energy. The furnace, specifically, is the largest source of energy waste. Top to bottom, everything must go. The new fire hall in St. Andrew's West is recognized as a model building for whenever action does take place.

### Implementation of Measures

In terms of implementing the behavioral measures, all staff will be made aware of what they can do to reduce their personal energy consumption while at work. This report will be made available to all staff and energy consumption training can be provided for if needed as well. Although the behavioural measures may seem like small factors, if everyone does their part, there can and will be a large difference in energy consumed throughout the year. As a general rule, 5% of annual consumption can be saved based on good daily habits (Township of South Stormont, 2014).

As a municipality, capital projects and other large commitments require an approval from council. Because of this, it is tough to know if, how or when things could happen. When projects do get approved, it is up to the appropriate manager to start moving things along. In the case of the Ingleside Waste Water Plant, the Director of Public Works would be heavily involved while the Fire Chief would be the most responsible for the Ingleside Fire Hall if either of these projects end up moving forward.

## Energy Efficiency of Acquired Equipment

When installing new technology at township buildings, Energy Star qualified products are always considered. These products meet strict specifications that are tested and certified for energy performance, making them ideal for making homes, factories and businesses more energy efficient (ENERGY STAR Canada, 2019).

Their logo, as seen in Figure 5, is easily recognizable across not only Canada, but internationally as well. It represents energy savings without compromising performance in any way. Products associated with this logo are typically in the top 15 to 30 percent of their class for energy performance. Only manufacturers and retailers whose products meet the Energy Star criteria can label their products with this symbol.



Figure 5: Energy Star Logo

## Consumption Reduction Goals

The proposed behavioural measures, projects and capital investments should, in theory, should reduce consumption of energy in municipal buildings. Different buildings have different purposes along with proposed measures, meaning they each should have their own realistic savings goal. As mentioned in other sections of this report, the township would like to simply reduce all types of energy consumption wherever possible – or at the very least, not increase. In facilities not affected by growth in the municipality, some kind of reduction in energy should definitely be possible. On the other hand, in buildings where consumption is affected by municipal growth, the township would like to maintain the same amount of energy consumption if a reduction is not possible.

## Monitoring, Evaluation and Tracking of Results

The finance department will continue to report municipal energy usage to the ministry on an annual basis, as they have for the past few years. At the same time, they will review the numbers and keep a running tab of them compared to recent previous years. All of this data shall be distributed to the energy management team for their acknowledgement as well as their review. Consumption data will allow them to determine where changes are needed in order to achieve higher efficiencies year after year.

## Energy Management Team

The energy management team at the Township of South Stormont, along with the assistance of the CAO, consists of the Director of Public Works, the Director of Finance/Treasurer, the Director of Parks and Recreation, the Director of Building/CBO, the Director of Planning/EDO,

the Fire Chief, the Finance and Payroll Coordinator and the Director of Corporate Services/Clerk.

### Renewable Energy

At the present time, South Stormont has no plans of implementing any kind of renewable energy. Despite this, council and senior management is willing to review and consider any feasible proposals that they may be presented with.

### Public Availability

In accordance to Ontario Regulation 507/18, this report shall be made available to the public via the township website as well as in printed form at the township office at 2 Mille Roches Road, Long Sault, Ontario.

## Appendix A: Building Information

Facility	Type	Address	City	Postal Code	Floor Area (m <sup>2</sup> )	Hours of Work/Week
Arena	Indoor Arena	60 Mille Roches Rd.	Long Sault	KOC 1P0	2808	84
East Garage	Equipment Storage and Maintenance	16571 County Rd. 36	Long Sault	KOC 1P0	925	40
EMS Building	Ambulance Station	409 Moulinette Rd.	Long Sault	KOC 1P0	190	40
Ingleside Sewage Lift Station	Sewage Pumping	14682 County Rd. 2	Ingleside	KOC 1M0	98	168
Ingleside Waste Water Plant	Sewage Treating	15005 Long Sault Parkway	Ingleside	KOC 1M0	355	168
Ingleside Water Booster	Water Pumping	14754 County Rd. 2	Ingleside	KOC 1M0	167	168
Ingleside Water Tower	Water Pumping	51 Dickinson Dr.	Ingleside	KOC 1M0	0	168
Library – Ingleside	Public Library	10 Memorial Square	Ingleside	KOC 1M0	104	35
Library – St. Andrews	Public Library	17283 County Rd. 18	St. Andrews	KOC 2A0	15	15
Library – Long Sault	Public Library	50 Mille Roches Rd.	Long Sault	KOC 1P0	282	30
Long Sault Sewage Lift Pump	Sewage Pumping	16125 County Rd. 36	Long Sault	KOC 1P0	0	168
Long Sault Waste Water Plant	Sewage Treating	702 Robin Rd.	Long Sault	KOC 1P0	1068	168
Long Sault Water	Water Pumping	16054 Lakeside Dr.	Long Sault	KOC 1P0	95	168
Long Sault Water Treatment Plant	Water Treating	15955 Lakeside Dr.	Long Sault	KOC 1P0	760	168
Newington Water	Water Pumping	21 Fairground Dr.	Newington	KOC 1Y0	31	168
OPP Station	Police Station	4 Mille Roches Rd.	Long Sault	KOC 1P0	1510	168
St. Andrews Booster Station	Water Pumping	5509 Highway 138	St. Andrews	KOC 2A0	33	168
St. Andrews Water Tower	Water Pumping	17368 County Rd. 18	St. Andrews	KOC 2A0	0	168
Station 1	Fire Station	50 Mille Roches Rd.	Long Sault	KOC 1P0	708	30
Station 2	Fire Station	1 Maple St.	Ingleside	KOC 1M0	245	5
Station 3	Fire Station	3931 County Rd. 12	Newington	KOC 1Y0	353	5
Station 4	Fire Station	5201 Highway 138	St. Andrews	KOC 2A0	345	5
Town Hall	Admin Offices / Council Chambers	2 Mille Roches Rd.	Long Sault	KOC 1P0	1400	50
West Garage	Equipment Storage and Maintenance	14951 Duffy's Rd.	Ingleside	KOC 1M0	404	5

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