

# Conservation and Management Energy Plan



2019-2024

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### **1.1.1 Background**

“This document is a living document that will be reviewed annually by staff and Council and updated as required. It has been prepared for the Corporation of the Township of South Algonquin to achieve compliance with Ontario Regulation 397/11 of the *Green Energy Act 2009*. Under this regulation municipalities and other public service bodies must prepare a five-year plan identifying strategies on how they will conserve energy and optimize consumption patterns.” This plan includes 2017 data usage and outlines measures that could be taken by the municipality to achieve objectives, goals and targets. It should be noted that measures are the preferred expectation however most of the measures are long term goals that would be dependent on incentive programs and additional funding through ministry programs.

### **1.1.2 Location and Geography of South Algonquin**

The Township of South Algonquin is located in Northeastern Ontario, directly adjacent to the world-famous Algonquin Provincial Park. It is accessed from the east and west by Provincial Highway #60 and from the south by Provincial Highways #127 and 523. South Algonquin is the southernmost municipality in the District of Nipissing. To the south it borders Hastings County, and to the west and east, respectively, it borders Haliburton and Renfrew Counties.

South Algonquin can generally be described as a remote and sparsely populated municipality. Located on the Canadian Shield, the Township is comprised mainly of forested areas, as well as numerous water bodies. Approximately 80% of the Township’s land base is composed of provincial Crown land, most of which is off-limits to new development. These factors, along with the Township’s relatively remote location away from major urban centers, have limited the availability of local economic development opportunities over the past few decades.

### **1.1.3 Staff Composition**

The Township operates with; A full-time CAO/Clerk-Treasurer, Road Superintendent, Deputy Clerk, Deputy Treasurer, Planning and Building administrator, Custodian, and a part time Chief Building Official. 5 full time staff, two seasonal rink attendants, two part-time road staff and 33 volunteer fire personnel.

### **1.1.4 Economic Characteristics of South Algonquin**

South Algonquin has a narrow economic base, characterized by dependence on the forestry, tourism, and retail sectors. The number and variety of job opportunities within the Township are both quite limited. This has led to a relatively high unemployment rate in the municipality, and at the same time, many community members are underemployed due to their reliance on seasonal and/or part-time jobs. South Algonquin’s economy is largely primary resource based, with the logging industry providing, both directly and indirectly, approximately 49% of the employment opportunities found within the Township.

### **1.1.5 Social and Demographic Characteristics**

Census data statistics for South Algonquin in 2011 demonstrate trends of an aging and declining population within the municipality. The Township had a median age of 51.9 (49.4 in 2006). Population decline in the Township can largely be attributed to the out-migration of youth, who tend to leave South Algonquin after graduating from high school and rarely return. These trends and a corresponding decline in the number of children living in the Township

have combined to result in South Algonquin senior's population (65+) being larger than the municipality's child and youth populations combined. In South Algonquin, 23.1 % (22.5% in 2006) of the population was aged 65 or higher in 2011, while only 21.1% (21.6% in 2006) of residents were less than 25 years old.

The population trends identified above – an aging population and significant youth out-migration – pose several issues for the municipality as it pertains to strategic planning and budgeting. The municipality has seen increases in assessment but very little increase in wages or cost of living for the senior population. The municipality has tried to keep the municipal levy minimal to offset the increase in assessment and meet its obligations to raise enough funds for the yearly operational budget.

The remoteness of the area has in some cases limited development, but also increased costs. The municipality cannot benefit from programs offered through LAS or benefit from bulk purchases or a competitive market. Due to our geographic location, we have limited choices in our service providers.

#### **1.1.6 Challenges of Single Tier Municipality relevant to consumption and cost savings:**

The Corporation of the Township of South Algonquin has always exercised prudent financial practices and attempted to control electricity and fuel consumption.

- Funding
- Aging Population and infrastructure
- Minimal industries and Assessment growth
- Few Commercial properties and industries
- Geographic Location: we are over two hours from any major center which would offer cost savings for bulk purchases or be able to take advantage of LAS agreements with large producers
- Suppliers are limited – cost of travelling is incorporated in rates
- Decreasing electricity consumption would require a reduction in service level
- Instituting a policy that reduces furnace fuel use will directly affect the health and well-being of staff
- The municipality cannot predict or attain cost savings when the fuel and hydro costs fluctuate and continue to increase
- Lighting retrofits were done in all of our buildings, but no further upgrades are planned without financial assistance as we have not seen any cost reduction resulting from these upgrades

#### **1.1.7 Energy Data Management**

- The rink attendants and volunteers of our recreation facilities monitor the heat in those buildings and the Deputy Treasurer follows the annual energy budget and analyze variances.

##### Energy Supply Management

- The municipality has contracted the services of the Association of Municipalities of Ontario (AMO),

- Local Authority Services (LAS) to participate in the electricity and natural gas procurement program. This program would remove the municipality from the Ontario government's Regulated Price Plan (RPP) and provide opportunities for strategic and competitive energy purchasing. Unfortunately, due to our geographic location, we cannot benefit from these programs and cannot benefit from savings
- **Energy Use in Facilities**  
In April 2013, the municipality completed an asset management plan during which time a review was done for our facilities. In upcoming years, when doing upgrades or repairs to our facilities, the municipality will evaluate economic opportunities in energy and water efficiencies.

#### **Equipment Efficiency**

- Ongoing maintenance and replacement of inefficient mechanical equipment is underway, including a review of our existing boiler systems and consider a replacement with an energy efficient system.

#### **Baseline Energy Use**

- Our fuel consumption cannot be reduced without jeopardizing the health and safety of our workers or doing some major retrofits which this small municipality cannot afford.

#### **Process Improvement**

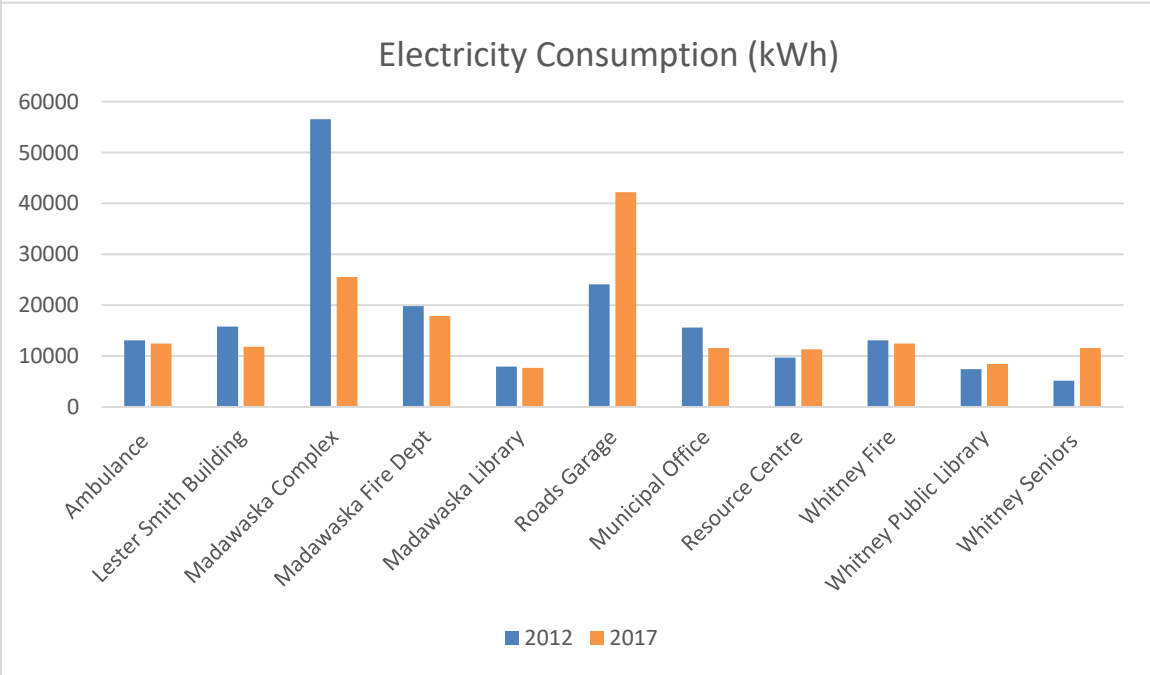
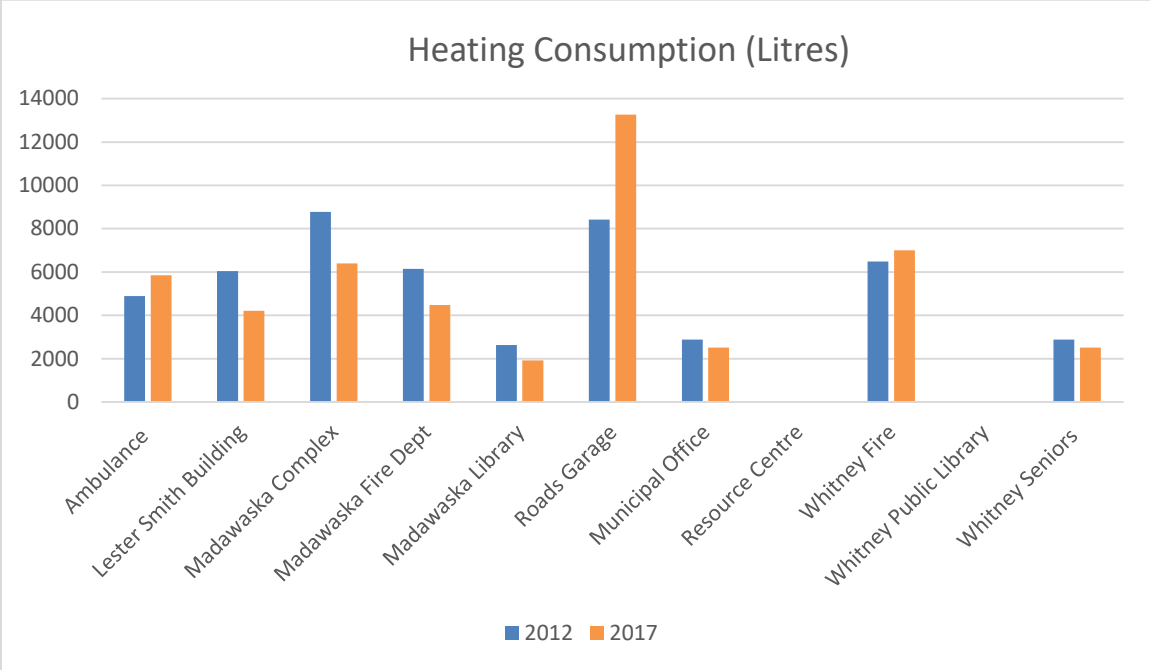
- With the implementation of the BPS website and updating the energy use, the management team can better track efficiencies and identify problem areas.

#### **Program Implementation**

- Develop a communications plan to promote the municipality's successes and initiatives as it pertains to energy savings to the community and our staff through our quarterly newsletter and implement a preventative maintenance program on the website.
- Continue to update and maintain our Corporate Energy Management Plan
- Develop and implement operating procedures throughout the facility encouraging turning down the heat when facilities not in use.
- Provide ongoing energy training for municipal staff.

#### **Projects**

- Review heating systems and recommend retrofits, or system upgrades or changes and review streetlights.



Over the five-year period (2012 and 2017) heating consumption and electricity consumption has decreased for most municipal buildings. The graphs demonstrate some cost savings and some increased costs at a couple of the locations. The savings were realized through staff education, new thermostats, and a new furnace at the Lestersmith Building. Cost increases can be attributed to increased use of buildings and the irregular pattern of energy consumption during the winter months from year to year.

### **1.1.8 Five Year Plan**

Prior to the Province of Ontario mandating energy conservation, the staff of South Algonquin Township has always practiced with a limited measure of cost control. Energy efficient lights, newer computer systems and other equipment have been purchased to reduce the consumption of electricity. Use of the Air conditioning unit has also been minimized and office lights are turned off during afternoon on sunny days.

#### **Levels of success achieved to date**

- The municipality was proactive and built a multi-use facility that encompasses a recreation center, a library, and the fire department to save hydro costs and heating costs.
- A former fire hall is now being utilized for storage and the hydro which is not needed has been disconnected.
- Municipal Staff reviewed all streetlights and sentinel lights, and some inactive lights were identified, and the municipality was reimbursed.
- Municipality took advantage of a retrofit matching program to upgrade lighting in municipal buildings.
- Over the next five years the Township will continue with current practices in order to control energy consumption while investing into reserve funds to maintain or upgrade the existing infrastructure. With financial incentives the municipality would consider investigating the upgrades of existing streetlights and prepare a phase in plan to replace the existing streetlights with a more energy efficient type. It's expected that continued infrastructure renewal projects will aid with energy savings.
- Staff and Council involvement through attendance of LAS workshops.

**NOTE:** The municipality does not have the financial resources to react any differently at this time. Nor do we see any circumstance over the five years without funding initiatives to assist with required changes to the heating system.

#### **INITIATIVES**

- Consider investigating the upgrades of existing streetlights and prepare a plan to replace the existing streetlights with a more energy efficient type.
- Staff awareness programs, posters, turn off lights, computers.

- Aging furnaces be replaced with propane furnaces to save cost and efficiencies.
- New buildings be built with efficiencies.
- Inform the community and staff of energy consumption goals.

### 1.1.9 Conservation Demand Measures

Goals and Measures are the actions that are taken to save energy and to help achieve the goals and objectives of the municipality. The Township of South Algonquin is committed to implementing organizational and behavioral measures that can produce energy savings and raise awareness on conservation and efficiencies.

GOALS and MEASURES	ACTIONS	PERFORMANCE MEASURES
Install occupancy sensors in all washrooms, storage cupboards and staff rooms	As upgrades are needed change to sensory lights	Reduced cost Less staff monitoring
Set goals and objectives to consider efficiencies when replacing aging infrastructure	Investigate existing boiler systems	Reduce cost and increase efficiencies
Develop, encourage, and implement an employee engagement program to solicit energy saving ideas from public agency staff	Continue to update and train staff on the energy management plan and energy initiative	Reduce costs increase awareness
Implement a preventative maintenance program	Review of the usage of the facility compared to cost to operate	Reduced costs and better use of facility
Continue to implement mechanical and building system upgrades	Continue to investigate savings through betterment or replacement	Reduce costs, extend life of system, find cost savings
Streetlights	Follow phased in plan to replace and add streetlights	Upgrade to efficiency lights with financial assisted programs
Develop and implement a facility walk through checklist	For employees to check mechanical equipment	To maximize life of equipment

Over the next five years the Township will continue to use best practices in order to control energy consumption while finding funding to assist with goals of achieving efficiencies. The staff and Council will work diligently to ensure they are fiscally responsible to their residents and are mindful of the health and wellbeing of their citizens. The municipality does not have the financial resources to invest in changing existing heating systems or streetlights but will continue to seek funds through the province whenever available.