

Township of Gillies

Energy Conservation and Demand Management Plan

Reviewed by Council – July 20th 2015

Background

Ontario Regulation 397/11 under the Green Energy Act, 2009 requires public agencies, including Municipalities, to report annually on their energy consumption and greenhouse gas emissions, beginning in 2013. The 2013 reporting related to 2011 total energy use. In 2014, public agencies were also required to develop and implement an “Energy Conservation and Demand Management Plan” (referred to in this document as the “Plan”).

The purpose of the Plan is to help the Township of Gillies reduce its energy consumption. It is directed to the corporate Township, and not to individual residents. Reducing energy consumption for climate change purposes is a solid policy in itself, but if done properly, it will also result in cost savings.

The Regulation sets out certain elements that must be included in the Plan. These are:

- Information on the Township’s annual energy consumption during the last year for which complete information is available
- The Township’s goals and objectives for conserving and otherwise reducing consumption and managing its demand for energy
- The Township’s proposed measures under the Plan, the cost and saving estimates for these proposed measures and the estimated length of time these measures will be in place
- Adoption of ground source heat pump technology, thermal water technology or thermal air technology in the future
- Confirmation that the Township’s senior management has approved the Plan.

The types of operations that are covered under the Plan are based on Ontario Regulation 397/11 and include:

- Administrative offices and related facilities including council chambers
- Community centres
- Fire stations and associated offices and facilities; and
- Storage facilities where equipment or vehicles are maintained, repaired or stored.

Where a public facility is used by more than one operation, a breakdown of the energy consumption for each area needs to be undertaken.

The Plan for Gillies Township will need to demonstrate that it was approved by senior management.

Gillies rents its Administrative office. Its Municipal garage and fire hall, while on the same premises, are separate buildings. No other buildings are owned by the Township. The Township has no community centre.

Energy Consumption

The reports on the energy consumption for Township facilities for 2013 are appended to this Plan as Schedules "A". An additional Schedule will be added annually, by July 1st, at the same time as the Township is required to file and report on the relevant year's energy consumption. This will allow the public to track the progress towards achieving the goals and objectives laid out in the Plan.

Goals and Objectives of the Plan

Goals and objectives for conserving and otherwise reducing energy consumption and for managing demand for energy are addressed in the Plan. These will act as a guide, and will provide focus and direction for the Plan. As recommended, the goals are ambitious (providing something to strive for) while remaining realistic and achievable.

Vehicle upgrades and renewal of the municipal fleet (both Roads Department and the Volunteer Fire Service) is being undertaken as affordability allows and in accordance with the Asset Management Plan. Newer vehicles have better fuel consumption statistics and have better pollution control systems.

It is the goal of Council to continue to monitor energy usage and to implement cost saving initiatives whenever renovations are required or funding sources identified. Some future cost savings could include:

- programmable thermostats at the garage and/or fire hall;
- alternative heating sources such as ground source heat pumps; and
- alternative energy sources such as solar or wind power.

Although these alternative sources of heat and power are an objective that Council will keep in mind, they must be dependent upon funding from sources in addition to (or instead of) the municipal tax base. When and if that funding becomes available, it will be applied for. At present, however, these technologies remain unaffordable.

All staff, as well as volunteers, have been educated informally on energy conserving habits, such as meeting during the day when possible, turning lights off in unused

rooms, manually reducing thermostat settings at night; etc. These habits will continue to be encouraged and supported. Being a small, rural Township, our staff and volunteers are a cohesive group with the best interests of the Township uppermost in their minds. Monitoring of good conservation habits is undertaken as a “best practice”, but is, more often than not, unnecessary.

Given the few number (and size) of owned facilities and vehicles, combined with increasing public demand for services, the ability for this Township to achieve significant energy use reduction is extremely limited.

Measures

The Plan is required to encompass the following:

- Proposed measures;
- The cost and savings estimate for these proposed measures; and
- The estimated length of time these measures will be in place.

Our measures at present for various energy consumption include:

- Kilowatt hours of hydro consumed in the garage and fire hall;
- Volumes of diesel and “regular” fuel consumed in Roads Department and Volunteer Fire Service vehicles; and
- Volumes of fuel consumed by furnaces in the garage and fire hall.

No other proposed measures are available based on the types of energy utilized in the Township.

Cost savings are measured based on reductions in consumed energy and fuel.

Variables will be involved which will impact these measurements – such as fluctuations in price of the energy/fuel in question, air temperatures, etc. Accordingly there may not actually be a cost saving even in circumstances where demand is reduced. All of these variables need to be kept in mind when comparing year over year data.

The Township will always strive to find the best possible reductions in greenhouse gas emissions and energy demands and these measures will be in place permanently. If funding becomes available to assist the Township with installations of ground source heat or solar and wind power, it is expected that greater savings could be found once the cost of installation is fully amortized.

No new buildings are being planned for the Township’s inventory in the near future.

The Township operates a set of five streetlights. Council has recently adopted a program whereby the lights will be replaced with LED streetlights over time. The LED streetlights are known to utilize less energy than the existing streetlights. The lights are

not, however, metered. A set rate is paid to Hydro One for each lamp. Accordingly, the reduction in energy consumption cannot be measured directly.

Administration will report annually on the progress of this plan.

The guidelines provide that measurement processes should define the “preferred state”, identify the “current state”, identify measures and document results. For Gillies’ purposes, a target percentage reduction in usage will be identified, with an understanding, of course, that the target will never equal zero and, at some point, energy conservation will reach a maximum achievable level. The percentage reduction will be an over-all goal rather than an annual one. For the purposes of this Plan, the target reduction is five (3%) per cent.

The Township will be pro-active in making energy-saving changes wherever possible and affordable.

Renewable Energy

The Township of Gillies does not presently utilize renewable energy in municipal operations. While it is desirable to undertake renovations in that regard for future, without assistance, Gillies cannot afford any of the capital outlay that would be required to transfer from traditional sources to renewable energy.

Adopting renewable energy in or for future projects will be dependent upon budgetary constraints and/or alternative sources of funding. Administration and Council will be mindful of these concerns when making relevant recommendations to Council for approval.

Plan Implementation

It is the intent of the Plan to be a document that is going to be used by Council to better manage the energy use and to reduce energy consumption. It is important that the Plan include tools to aid with the implementation of the Plan such as:

- Prioritize the measures
- Develop timelines for the measures
- Assign responsibility for the measures
- Link the Plan to other corporate activities or goals

Council continues to rely on its staff and volunteers to assist with energy conservation. Other measures, such as programmable thermostats will be implemented when funding allows or renovations are occurring. Every available method or product which assists to

reach the reduction target is considered important and will be reviewed. Where possible, changes will be implemented immediately. The staff and volunteers will be tasked with taking responsibility for these measures in their relevant workplaces. Other corporate activities or goals such as economic development and expansion shall have regard for these goals and objectives when in the planning stages. As the Township of Gillies is a small, rural Township, with a small workforce, Council feels that each employee (and volunteer) will be able to implement the measures and track any cost savings without a detailed plan.

This Plan will be linked to the Township's Asset Management Plan.

Monitoring and Evaluation

Ontario Regulation 397/11 requires that the Township report on the Plan at the end of a 5 year planning period. Reporting will require that an Energy Consumption and Greenhouse Gas Emissions template be submitted by July 1, 2019. The template will include the results of current and proposed conservation measures, a revised forecast of the expected results of the current and proposed measures, a report on the actual results achieved and a description of any proposed changes to be made.

Administration

Ontario Regulation 397/11 requires that the energy Conservation and Demand Plan be made publically available by publishing it on the Township's website and making it available, upon request, in printed form.

This Plan will be adopted by resolution by Council.

Schedule "A" – Energy Use Reporting for 2013