



# **TOWNSHIP OF HOWICK**

## **ENERGY MANAGEMENT PLAN**



**June 2014**

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**1. Introduction & Background**

The Ontario Provincial Government has committed to help public agencies better understand and manage their energy consumption. As part of this commitment, Ontario Regulation 397/11, under the Green Energy Act, requires municipalities to report on their energy consumption and greenhouse gas (GHG) emissions and to develop and implement Energy Conservation and Demand Management Plans, starting in 2014.

There are significant advantages to having a CDM plan. Reducing energy consumption frees up limited funding that can be better directed towards core activities.

**2. Declaration of Commitment:** The Township of Howick is committed to developing and implementing a strategic energy management plan that will reduce our energy consumption and its related environmental impact. The Municipality will take reasonable efforts to minimize impacts to the environment when allocating resources, while recognizing the needs of our residents and visitors.

**3. Vision:** The Township of Howick will strive to continually reduce our total energy consumption and associated carbon footprint through wise and efficient use of energy and resources, while still maintaining an efficient level of service for our clients and the general public.

**4. Policy:** The Township of Howick will strive to incorporate energy efficiency considerations into all service areas activities including our organizational procedures, procurement practices, financial management and investment decisions, as well as facility operations and maintenance.

**5. Goals & Objectives:**

- To improve the energy efficiency of our facilities by utilizing the best practices to reduce our operating costs, energy consumption, and greenhouse gas emissions.
- To implement a comprehensive corporate energy management program to reduce energy consumption, achieve cost savings, and meet greenhouse gas emissions targets for all energy using facilities.
- To reduce the environmental impact of the Municipalities operations.
- To create a culture of energy conservation and sustainability
- To increase the safety and comfort of staff and patrons utilizing the Municipal facilities.
- To improve the efficiency and reliability of the Municipality's equipment and reduce maintenance.
- To invest in renewable energy projects associated with municipal infrastructure, whenever feasible.

**6. Target:** Concerns over ever-increasing energy prices, and the negative impact of fossil fuels on the environment have raised interest in energy conservation, sustainability, and predictable energy rates. The Township of Howick will strive to reduce our energy consumption (electricity, natural gas, propane and gasoline) by 5% in municipal operations by 2019. The Energy Reduction Target will apply to all departments and facilities owned by the Municipality. It is recognized that the ability to meet the target relies on the allocation of resources to implement energy reducing initiatives.

**7. Energy Supply Management:** Our municipal energy is supplied via a number of providers as outlined below:

- Electricity is supplied by Hydro One
- Propane is supplied by Sparlings and local suppliers.
- Heating Oil is supplied by local suppliers.
- Natural Gas is not available to any Municipal Facilities

## **8. Current Municipal Energy Situation:**

### **8.1 *How We Manage Energy Today:***

- The management of energy consumption and the energy performance of our facilities and equipment are the responsibilities of the Department Heads.
- Our municipal energy data and reporting is managed through the Treasury Department. The data is received via supplier invoices, is tracked and monitored using the Energy Consumption and Greenhouse Gas Emission Template, prepared by the Ministry of Energy as a tool to assist in tracking and reporting energy use.
- Every employee and volunteer has a role in ensuring that energy conservation activities are a success through the day-to-day management of their own actions to minimize costs and consumption of energy.

**8.2 *Summary of Current Technical Practices:*** The Department Heads and volunteer boards are responsible for the assessment of operations and maintenance practices for the municipal facilities and equipment. The municipality is currently collecting and reporting on data for the following facilities:

- 1) Township Works Shed
- 2) Township of Howick Municipal Office
- 3) Howick Community Centre
- 4) Belmore Community Centre
- 5) Fordwich Community Hall
- 6) Wroxeter Community Hall
- 7) Howick Fire Hall
- 8) Gorrie Community Hall
- 9) Gorrie Swimming Pool
- 10) Streetlighting will be added to the report as time permits.

**8.3 Summary of Current Energy Consumption:** The total annual energy consumption in the above municipal operations, not including streetlighting, for 2012, was 866,044 kwh, at a cost of \$117,411.39 per year for hydro; 23044 litres at a cost of \$21,526.98 for Heating Oil; and 61,913 litres of propane at a cost of \$23,625.84. The Total GHG emissions were 244,553.6 kg/year eCO<sub>2</sub>. The current energy usage for 2012, by facility, is detailed in Appendix A. This energy consumption data will provide a baseline to track the municipality's progress towards achieving the goals and objectives laid out in this CDM plan.

## **9. Organizational Planning and Measures:**

**9.1** The Municipality will strive to improve awareness of employees and volunteers of energy conservation, climate change and greenhouse gas emissions;

**9.2** The Municipality will, whenever financially feasible, conduct energy audits on all municipal facilities that have not been audited, to determine energy saving potential.

**9.3** The Municipality will implement recommendations where energy savings are identified and where the recommendations are financially feasible.

**9.4** The Municipality will implement the efficiency of energy use through low-cost opportunities by implementing and the following:

- Sound operating and maintenance practices such as
  - a) shifting usage from times of peak demand to off-peak times where possible.
  - b) shutting down unnecessary equipment
  - c) shifting to an alternate energy source
  - d) replace equipment/materials with energy efficient models
- Employee training and staff awareness
- Monitoring and tracking energy consumption for all facilities
- Incorporating energy efficiency in the purchasing and procurement policy

**9.5** The Municipality will consider energy savings opportunities in all planned capital investment projects and procurement of goods and services. The procurement policy will be amended to incorporate energy efficiency into the criteria for selection of materials and equipment.

**9.6** The Municipality will strive to achieve a reduction in the energy intensity (energy per square foot/metre) of Municipally owned buildings and operations by 5% over the next five years.

**10. Evaluation and Review:** As part of any energy management strategy, continuous monitoring, verification, and reporting is an essential tool to track consumption and dollar savings. The Treasury Department will monitor and track energy consumption for all facilities reported to the Ministry of Energy and will provide an annual up-date of energy consumption to department heads and the volunteer boards to ensure that all departments and boards are aware of any successes or challenges to our energy reduction goals and objectives.

**10.1** Annual Energy Consumption data will be measured annually against the previous year's consumption data on a facility and overall consumption basis.

**10.2** A five-year review will be conducted of the Energy Management Plan to determine successes and failures of the energy reduction initiatives. The consumption will be measured against the 2012 base line to determine if the energy reduction target has been achieved.

**Attachments:**     ***Appendix A - 2012 Consumption Data (Baseline)***  
                          ***Appendix B - Departmental Energy Management Initiatives***

## Appendix A

Objective	Measure	Department	Date
Awareness	Energy Reports to be distributed to Department Heads and Board Chairpersons for all facilities	Treasury	Annually
Awareness	Provide for Energy Management Training of New and Existing Staff	All	Ongoing
Awareness	Investigate Energy Efficient initiatives and complete energy audits when necessary	All	Ongoing
Corporate Energy Program	Incorporate energy saving practices into daily routines (eg turn off lights, electronic equipment, )	All	Ongoing
Reduce Energy Consumption	Enhance Building Envelope - window replacement program, sealing, caulking, weather-stripping, etc	All facilities	Ongoing
Corporate Energy Program	Incorporate energy saving recommendations into Health & Safety inspections of facilities.	All facilities	2014
Reduce Energy Consumption	LED Streetlight Retrofit in Gorrie, Lakelet, Belmore, Fordwich and Wroxeter	Works	2014
Corporate Energy Program	Amend Municipal Procurement Policy to incorporate Energy Efficiency considerations	Treasury	2014
Reduce Energy Consumption	Purchase Energy Efficient HVAC systems when replacing existing equipment	All facilities	Ongoing
Reduce Energy Consumption	Purchase Vehicles with better gas mileage when replacing fleet, where possible	Fire, Works	Ongoing
Reduce Energy Consumption	Convert Exit Signs to LED	All facilities	Ongoing
Reduce Energy Consumption	Convert Lighting to Energy Efficient alternatives	All facilities	Ongoing
Reduce Energy Consumption	Purchase Energy Efficient Hot Water Heaters, Equipment when replacement is required.	All facilities	Ongoing
Renewable Energy	Install Solar Panels at pool	Pool	2014
Reduce Energy Consumption	Add programmable thermostats to heaters/equipment.	All facilities	Ongoing

***Appendix B***

2012 Energy Consumption and Greenhouse Gas Emissions Report