



Energy Conservation and Demand Management Plan

Township of Perry: 2014 to 2019

1. Commitment

Declaration of Commitment

The Township of Perry will allocate the necessary resources to develop and implement an Energy Conservation and Demand Management Plan as required under Regulation 397/11 of the Green Energy Act. Staff and council will ensure that the objectives presented in this plan are achieved and that progress towards those objectives is monitored on an ongoing basis. Staff and council will update the plan as required under Regulation 397/11 of the *Green Energy Act* or any subsequent legislation.

Vision

The Township of Perry will strive to continually reduce our total energy consumption and associated greenhouse gases (GHGs) through wise and efficient use of energy and resources, while still maintaining an efficient and effective level of service for the general public. This will involve a collaborative effort to increase the education, awareness, and understanding of energy management within the Township. Total energy consumption includes electricity, natural gas, and oil. Everyone has a role in the wise use of energy and to showcase appropriate leadership within municipal facilities and operation.

Goals

The Township of Perry Energy Conservation and Demand Management Plan has been completed to help achieve the following goals:

- Maximize fiscal resources and avoid cost increases through direct and indirect energy savings
- Reduce the environmental impact of the Township's operations
- To create a culture of conservation within the Township

Overall Target

The Corporation of the Township of Perry will reduce overall municipal energy consumption by 5% from 2014 to 2019.

Objectives

In order to meet the strategic goals of the Energy Conservation and Demand Management Plan, there are a number of goals and objectives that align with its development and implementation:

- Ensure energy efficiency consistency across municipal facilities
- Monitor and report on energy consumption in annual intervals
- Better analyze energy costs and look for savings opportunities. This will include looking at energy commodity procurement options and taking advantage of all available resources and funding for energy projects
- Raise staff and Council awareness around energy efficiency
- Identify and investigate renewable energy generation opportunities

Timeline

The Township of Perry's energy conservation and demand management measures will be in place for the next five years at the very least. Following that time, a renewed plan will be required in order to meet future needs.

Approval

This plan has been formulated with the input of Township of Perry senior management staff and has been approved by Township administration as per Regulation 397/11.

Publication

This plan will be made available electronically to the public on the municipal website and in hardcopy at the Township of Perry Municipal Office.

2. Organizational Understanding

Energy Needs

The Township of Perry requires reliable, low-cost, sustainable energy sources delivering energy to the most efficient facilities and energy-consuming technology feasible.

Summary of Current Energy Consumption, Cost and Greenhouse Gases (2012)

Annual energy consumption: 204,896 kWh

Natural gas consumption: 8,359.29 m³

Cost: \$41,052.98 in electricity, \$3,423.75 in natural gas

Greenhouse Gas Emissions (CO₂): 35,482.5133 kg

Renewable Energy Utilized or Planned

The Township of Perry will aspire to investigate and show leadership in the promotion and development of renewable energy systems that are compatible with the Township's Asset Management Plan and land use planning objectives. The Township of Perry will investigate the potential of developing solar photovoltaic systems on the rooftops of municipal facilities that could benefit from such a retrofit. The Township will also continue to pursue the development of a small hydro-electricity facility in the area of Brook's Falls.

3. Resources Planning

Energy Leader

The Deputy Clerk will be designated as our energy leader with overall responsibility for Township energy management.

4. Projects Execution

Municipal Level

The Township of Perry will carry out the required development of business procedures, communication programs and implement them methodically according to the planned time lines within the resource constraints that apply. The administration and implementation of this plan will be the responsibility of the Deputy Clerk, the Manager of Public Works and Facilities and the Treasurer. It will be the responsibility of all Township staff to be aware of their energy use and work towards conservation. Through staff engagement and energy management processes, staff will be able to see the results of their efforts, and benchmark between corporate facilities and with industry standards.

Asset Level

The Township of Perry will use department employees to facilitate the implementation of procedures and communication initiatives, including energy performance reporting. In order to sustain a corporate culture of conservation, staff must be engaged in an effective awareness and education program. Although management staff have the lead responsibility in ensuring Township facilities operate efficiently, all Township staff should be familiar with and utilize energy efficient measures where possible. In addition, any facilities requiring rehabilitation, renewal and/or replacement will incorporate energy saving strategies where possible.

5. Review

Plan Review

Township Staff will review and evaluate our energy plan on an annual basis, revising and updating it as necessary, as based on the Energy Consumption Reports that are submitted to the Ministry of Energy on an annual basis as required under Regulation 397/11.

Reports

Annual energy performance summary reports will be generated to apprise Council of the progress made towards our corporate energy goals and objectives. The general public will be apprised of energy performance of municipal facilities and the impact of implemented energy management measures where appropriate.

6. Evaluation Progress

Energy Consumption

The Township will continue to track and report on energy consumption as part of our regular reporting on energy consumption. Annual data will be compared to that of previous years in order to determine the efficacy of the Energy Conservation and Demand Management Plan.

Green House Gas Emissions

The Township will continue to track and report on GHGs as part of our regular reporting on energy consumption and will evaluate progress in this area against our overall reduction target.

7. Energy Consumption and GHG Emissions (From 2012/1/1 to 2012/12/31)

Facility Name	Address	Total Area (m3)	Hours per week	Fuel Types	Consumption	Cost	GHG Emissions (kg)	Energy Intensity (ekWh/sqft)
Facility Primary Type: Office								
Administration Office	1695 Emsdale Rd	480	40	Electricity	98453 kWh	\$ 7,191.04	9455.4260	19.05522
				propane	6150.21 l	\$ 2,570.16	9160.4824	
Facility Type Total:						\$ 9,761.20	18615.9084	19.05522
Facility Primary Type: Fire								
Emsdale Fire Hall	16 Ellen St	275	14	Electricity	8453 kWh	\$ 1,445.06	811.8261	2.85565
				Furnace Oil	2258.2 l	\$ 2,454.42	6118.1516	
Novar Fire Hall	50 McCrandle St	257	14	Electricity	11117 kWh	\$ 1,888.04	5191.0020	12.39737
				Natural Gas	2180.93 m3	\$ 1,012.92		
Facility Type Total:						\$ 6,800.44	12120.9797	15.25302
Facility Primary Type: Community Centre								
Emsdale Community Centre	32 Joseph St	286	20	Electricity	13208 kWh	\$ 1,888.89	1268.4960	4.29040
				Propane	1188.02 l	\$ 614.26	1769.5065	
				Furnace Oil	3226.8 l	\$ 3,526.92	8742.3841	
Perry Public Library	29 Joseph St	146		Electricity	8805 kWh	\$ 1,258.96	845.6322	5.60277
				Furnace Oil	1900.32 l	\$ 2,078.76	5148.5457	
Novar Community Centre	25 Laurie St	285	20	Electricity	10782 kWh	\$ 1,752.66	12716.4800	24.91875
				Natural Gas	6178.36 m3	\$ 1,951.54		
Facility Type Total:						\$ 13,071.99	30491.0445	34.81192
Facility Primary Type: Public Works								
Works Shed	80 Old Government Road	4900	40	Electricity	32281 kWh	\$ 4,465.56	3100.2670	0.61204
				Propane	5327.1 l	\$ 2,893.68	7934.4943	
Transfer Station	775 Hwy 592	309	40	Electricity	21797 kWh	\$ 3,121.87	2093.3840	6.55337
Facility Type Total:						\$ 10,481.11	13128.1453	7.16541
GRAND TOTAL:						\$ 40,114.74	74356.0779	76.28557

8. Programs

Description	Facility	Contact	Date	Status
Energy Awareness at Management Meetings	All facilities	Brian Gilmer	01-Jul-14	Active
Details - Add energy awareness to management meetings. This will provide a platform to discuss topics like the current costs of energy consumption, future implications of current usage, areas for improvement and ways to reduce energy use.				
Employee Participation Program	All facilities	Brian Gilmer	01-Jul-14	Active
Details - Invite employees from all departments of the Township to recommend ideas to reduce energy use in their departments.				
Energy Accounting	All facilities	Jane McPherson	01-Jul-14	Active
Details - Quarterly utility usage and costs should be monitored to identify trends and emphasize anomalies to better predict future usage requirements.				
Efficiency Standards	All facilities	Brian Gilmer	01-Jul-14	Active
Details - Standards of performance will be developed to identify and implement temperature regulations for each building for the following - indoor temperature for occupied space indoor temperature for unoccupied space; desirable hot water tank temperature; maximum light levels for occupied space				
Energy Efficiency Purchases Standards	All facilities	Dave Creasor	01-Jul-14	Active
Details - All potential asset purchases will be subject to energy use evaluations to determine the energy consumption of the potential purchase. In the decision making process, preference will be given to assets that use less kWh or are Energy Star rated.				
After hours Lights Out	All facilities	Brian Gilmer	01-Jul-14	Active
Details - The Township will adopt a strategy to ensure that lighting is turned off during periods where facilities are not in use after hours. Staff who use the facilities after hours will be advised to keep only the areas of occupation lit after hours.				
Lunch & Learn	All facilities	Brian Gilmer	01-Jul-14	Active
Details - Host annual lunch meeting for key staff and management to learn more about energy savings and available programs.				

9. Processes

Description	Facility	Contact	Date	Status
Enhance Building Envelopes	All facilities	Dave Creasor	01-Jul-14	Active
Details - Energy consumption at each municipal facility will be closely inspected. Municipal buildings that are identified as critical in terms of heating and cooling energy consumption will be re caulked, weather stripped, and insulated to reduce air leakage. An estimated 5% of energy will be saved per building.				
Annual Energy Reports	All facilities	Jane McPherson	01-Jul-14	Active
Details - Energy reports will be produced annually for management review and reduction analysis using the L.A.S. E.P.T. online software				
Possible Vending Machine Retrofit	Municipal Office	Dave Creasor	01-Jul-14	Active
Details - The vending machines at the Municipal Office will be properly inspected to ensure they are energy efficient. If they are found to be of poor energy efficiency, alternatives such as new machines or timers will be utilized.				
Energy Organization	All facilities	Brian Gilmer	01-Jul-14	Active
Details - Staff will look into joining an energy conservation organization to bring new energy planning ideas and trends to Management and Council meetings.				
Energy Planning at Management Meetings	All facilities	Brian Gilmer	01-Jul-14	Active
Details - Energy planning will be added to discussions at Manager Meetings to reduce consumption and increase cost savings.				

10. Projects

The following list highlights many options to increase energy efficiency for municipal facilities but **does not** represent all current or proposed projects. Major projects and/or renovations will of course still be subject to Council approval and budget considerations.

Description	Facility	Contact	Date	Status
Enhance Building Envelopes	All facilities	Dave Creasor	01-Jul-14	Active
Details - Energy consumption at each municipal facility will be closely inspected. Municipal buildings that are identified as critical in terms of heating and cooling energy consumption will be re caulked, weather stripped, and insulated to reduce air leakage. An estimated 5% of energy will be saved per building.				
Efficient Lighting	All facilities	Dave Creasor	01-Jul-14	Active
Details - Where feasible, the use of energy efficient lighting will be considered. Occupancy sensors could also be installed in low volume areas to control lighting conditions. An estimated 5% of energy will be saved per building.				
Programmable Thermostats	All facilities	Dave Creasor	01-Jul-14	Active
Details - Where feasible, the use of programmable thermostats to replace those of the analog variety will allow the Township to better control energy during peak periods. An estimated 5% of energy will be saved per building.				