

Conservation and Demand Management Plan

June 27, 2014



(Table 1 updated June 29, 2015)

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1. INTRODUCTION

The Township of Ryerson is a small municipality located in the east Parry Sound region known as the Almaguin Highlands (see Figure 1). With a population of 634 permanent residents (2012 Census), the Township is rural in nature, relying on the adjacent Village of Burk's Falls for primary amenities.

The Ontario Ministry of Energy requires under O. Reg. 397/11 that all municipalities prepare and make available a five year energy Conservation and Demand Management (CDM) plan. The Ministry's goal is to develop a culture of energy consciousness and conservation within public sector agencies.

Ryerson has prepared its CDM with the intention to

- allocate the necessary resources to reduce energy consumption and its related environmental impact;
- exercise stewardship in its use of energy resources to demonstrate leadership, optimize delivery of services, and enhance the overall quality of life in the community; and
- improve the energy efficiency of Municipal facilities and processes in order to reduce operating costs, energy consumption and associated greenhouse gas emissions

Ryerson's CDM is effective July 1, 2014 for a period of five years, and it will be reviewed and updated on an annual basis.

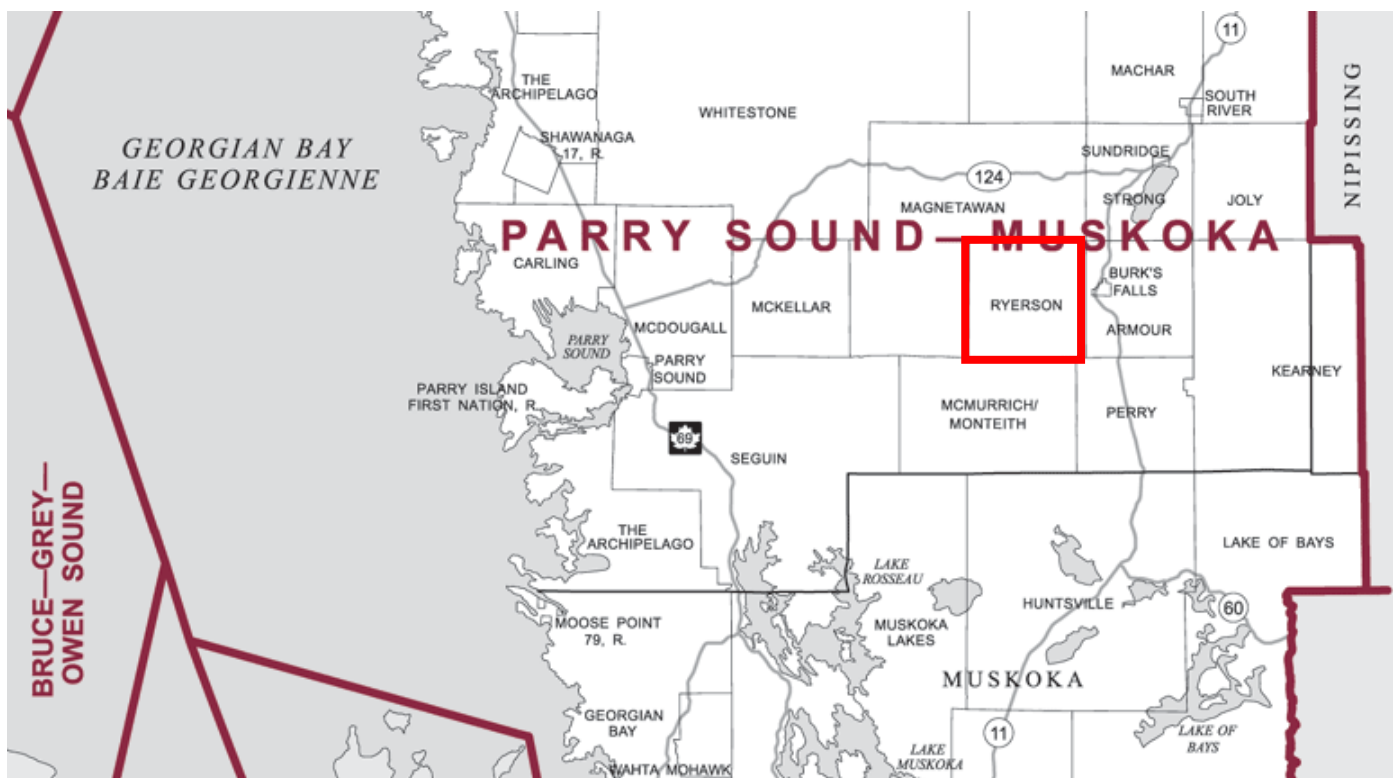


Figure 1. Location of Ryerson Township within the District of Parry Sound - Muskoka

2. ENERGY CONSUMPTION AND GREENHOUSE GAS REPORTING

Ryerson owns and/or is responsible for four buildings, and it manages the energy consumption of five associated operations (see Figure 2 for locations). In 2013, Ryerson was required under O. Reg 397/11 to report on energy consumption for 2011. As such, consumption data will lag behind this plan by two years. The completed Ministry reporting sheets are available at www.ryersontownship.ca, and summaries are included in Table 1.



Figure 2. Locations of Ryerson-managed operations as detailed in Table 1

3. OBJECTIVES AND GOALS

Objective: to be energy efficient and cost effective while meeting the needs of the Township

Goals:

1. To have routines in place to reduce energy consumption in all operations
2. To seek funding and/or create a reserve to afford to increase energy efficiency of buildings
3. To consider the validity and accessibility of technology to reduce consumption of energy

4. PROPOSED MEASURES

Measures are the actions taken to save energy and help achieve goals and objectives. Due to the financial constraints inherent in small municipalities such as Ryerson, future measures will be undertaken only as funds become available. Depending on the availability and amount of annual project funding, the proposed measures will be prioritized, and the potential cost savings and timelines will be determined.

- a. **Organizational Measures:** Ryerson is committed to purchasing goods and services from providers who value energy efficiency. Although there is not currently a need for new construction, any new buildings will be constructed sustainably, with the highest level of energy efficiency possible given other limitations.
- b. **Behavioural Measures:** With a small staff, Ryerson is fortunate to have excellent inter-departmental communication. Each employee is involved in the budgeting process; they understand the budget's effect on each department and the need to save on energy costs wherever possible. Staff is asked for their suggestions on how to improve energy efficiency and reduce consumption in the workplace. New purchases and changes are discussed with respect to their efficiency and effectiveness. Informal staff meetings are held to discuss ways to reduce energy consumption, such as turning lights off when not in use and using or increasing heat or A/C only when necessary.

Table 1. Energy Consumption and Greenhouse Gas Emissions Reporting for Ryerson buildings, 2011 to 2016

Energy Consumption and Greenhouse Gas Emissions Reporting - 2011 to 2016											
Sector		Municipal									
Agency Sub-sector		Township									
Organization Name		Township of Ryerson									
Operation	Address	City	Postal Code	Total Floor Area (ft ²)	Avg hrs/wk	Reporting Year	Energy Type and Amount Purchased and Consumed in Natural Units			Total	
							Electricity (kWh)	Natural Gas (m ³)	Propane (L)	GHG Emissions (Kg)	Energy Intensity (ekWh/sqft)
1. Township of Ryerson Office	28 Midlothian Road	Burk's Falls	POA 1C0	1500	60	2011	23392			2293.4	15.6
						2012	22459			2157.0	15.0
						2013					
						2014					
						2015					
						2016					
2. Township of Ryerson Public Works Garage	28 Midlothian Road	Burk's Falls	POA 1C0	4500	50	2011	7797		13577	21727.3	22.9
						2012	7486		12007	19221.0	20.4
						2013	30885		17595	29461.4	25.8
						2014					
						2015					
						2016					
3. Fire Hall	168 Ontario Street	Burk's Falls	POA 1C0	3250	168	2011	8346	6961		13978.3	25.3
						2012	9920	7205		14574.4	26.6
						2013	9410	5903		11875.6	22.2
						2014					
						2015					
						2016					
4. Fire Department Communications Building	409 High Street	Burk's Falls	POA 1C0	100	168	2011	3866			379.0	38.7
						2012	3323			319.1	33.2
						2013	2237			170.0	22.4
						2014					
						2015					
						2016					
5. Burk's Falls and District Museum	106 Midlothian Road	Burk's Falls	POA 1C0	660	30	2011	1871			183.4	2.8
						2012	5789			555.9	8.8
						2013	13911			1057.4	21.1
						2014					
						2015					
						2016					

MERGED WITH TOWNSHIP GARAGE

Technical Measures:

1. Township of Ryerson Municipal Office

- a. *Past Measures:* exterior wall insulation updated in 2010; light bulbs converted to energy-efficient fluorescent; blinds installed on south-facing windows

- b. *Future Measures:* (i) upgrade to programmable thermostats; (ii) upgrade electric baseboard heaters or replace with propane furnace (connected to garage); (iii) build airlock onto main entryway to prevent loss of heat; (iv) upgrade windows; (v) upgrade lighting (fewer fixtures, LED lights)
 - c. *Costs:* TBD
 - d. *Projected Savings:* TBD
 - e. *Lifespan:* TBD
2. Township of Ryerson Public Works Garage
- a. *Past Measures:* exterior wall insulation updated in 2010; garage doors partially insulated; light bulbs converted to energy-efficient fluorescent
 - b. *Future Measures:* (i) finish insulating garage doors; (ii) insulate roof; (iii) build airlock onto garage/office doorway to prevent loss of heat; (iv) install automatic garage doors to limit amount of time spent open in winter months; (v) upgrade lighting (fewer fixtures, LED lights)
 - c. *Costs:* TBD
 - d. *Projected Savings:* TBD
 - e. *Lifespan:* TBD
3. Burk's Falls and Area District Fire Hall
- a. *Past Measures:* some equipment doors upgraded; front entryway door upgraded; light bulbs converted to energy-efficient fluorescent
 - b. *Future Measures:* (i) finish upgrading equipment doors; (ii) upgrade lighting (fewer fixtures, LED lights)
 - c. *Costs:* TBD
 - d. *Projected Savings:* TBD
 - e. *Lifespan:* TBD
4. Fire Department Communications Building
- a. *Past Measures:* none
 - b. *Future Measures:* none – building will be decommissioned in the coming years
 - c. *Costs:* n/a
 - d. *Projected Savings:* n/a
 - e. *Lifespan:* n/a
5. Burk's Falls and District Museum
- a. *Past Measures:* replaced old oil furnace with new electric furnace
 - b. *Future Measures:* (i) install programmable thermostat (ii) re-insulate entire building; (iii) replace windows; (iv) upgrade lighting (fewer fixtures, LED lights)
 - c. *Costs:* TBD
 - d. *Projected Savings:* TBD
 - e. *Lifespan:* TBD

5. RENEWABLE ENERGY GENERATION FACILITIES

There are two solar farms operated by Northland Power in adjacent Armour Township. Ryerson has no such renewable energy facilities, though Council will consider rezoning applications on a case-by-case basis.

6. CONFIRMATION

This CDM plan has been approved by the Township Clerk. It will be made available on Ryerson's website (www.ryersontownship.ca) and paper copies will be available at the Township office:

28 Midlothian Rd,
Burk's Falls, ON,
POA 1C0