



**Energy Management  
Plan**



**June 2014**



## **Introduction**

The Township has been working on “Energy Management” informally since 2009 by capturing consumption details so that opportunities for improvement could be identified. Data has been captured and analyzed from 2008 forward.

The Green Energy Act mandates that all Broader Public Sector organizations, including Municipalities, produce a five (5) year Conservation and Demand Management Plan by July 1<sup>st</sup>, 2014.

This document, the Township of Selwyn Corporate Energy Management Plan, will clearly state the Corporation’s commitments to energy management and outline the objectives to be implemented to achieve energy savings and conservation initiatives.

## **Our Commitment**

### **Declaration of Commitment and Council Resolution**

The Township of Selwyn will allocate the necessary resources to develop and implement an energy management plan that will guide us in helping to reduce our energy consumption and the related environmental impact.

### **Vision**

The Township of Selwyn will exercise stewardship in the use of finite energy resources to demonstrate leadership, optimize delivery of services, and enhance the overall quality of life in our community.

### **Policy**

The Township of Selwyn will incorporate energy efficiency into all areas of municipal operations including our organizational procedures, procurement practices, financial management, investment decisions, and facility operations and maintenance.

## **Organizational Understanding**

The Township of Selwyn needs reliable, affordable, sustainable energy sources that deliver energy to our facilities. Township facilities need to be energy efficient and utilize modern and efficient technology.



## Stakeholder Needs

The Township of Selwyn's internal stakeholders include Council, Management Team, and Staff. The Township's internal stakeholders need:

- Clear and concise plans that will help guide decision making, with a clear vision, goals and objectives. A good plan will help communicate commitment to energy conservation.
- Information and feedback that allow measurement on progress
- On-going training and support that continues to develop in-house expertise required to implement the Corporate Energy Management Plan

The Township of Selwyn's external stakeholders include citizens, businesses, community groups, provincial and federal government and their respective agencies. The Townships external stakeholders need the municipality:

- To be accountable for energy conservation and management
- To minimize the energy component of the costs of municipal services
- To reduce greenhouse gas emissions (carbon footprint) associated with Township energy use

## How the Township Manages Energy Today

The management of all forms of energy consumed (electricity, natural gas, furnace oil, propane, diesel) is based on tracking energy consumption and cost data, researching energy supply opportunities, and monitoring energy use at the facility / equipment level.

### Energy Data Management

The current practice captures detailed consumption and cost information by utility account on spreadsheets developed in-house. Periodic totals are used to analyze trends and will be used to generate reports to stakeholders. Annual totals are entered into the Energy Planning Tool, a web based subscription service available to the Township through Local Authority Services (LAS), which is required to facilitate reporting annual consumption to the Province. Annual performance is also summarized on a single page chart, with associated graph, to track trends from year to year.



## **Energy Supply Management**

Current practice is to purchase energy supply through a direct relationship with the following suppliers:

- Electricity is supplied by Peterborough Utilities (Lakefield Ward) and by Hydro One (Smith and Ennismore Wards). Electricity is purchased on an as needed basis and is priced at the standard rates offered by each utility.
- Natural Gas is supplied by Enbridge. Natural Gas is purchased on an as needed basis and is priced at the standard rates offered by Enbridge.
- Propane is supplied by Superior Propane. Propane is purchased on an as needed basis and is priced at the standard rates offered by Superior Propane.
- Furnace Oil is supplied by Deeth and White. The Township participates in a bulk cooperative purchasing plan with the County of Peterborough and other Townships in our region. This agreement is reviewed every 3 years.
- Heavy vehicle fuel is supplied by Suncor / Petro-Canada. The Township participates in a bulk cooperative purchasing plan along with other municipalities in our region. This agreement is reviewed every 3 years.

Township staff also monitors opportunities to participate in a variety of energy purchasing plans that are available under contract. These types of plans offer a fixed price for a fixed term that can remove some of the market volatility from fluctuating energy prices. There are pros and cons to participating in these plans; however these offerings are monitored so that if an opportunity presents itself, an informed decision can be made.

## **Energy Use Management**

Current practice is to rely on the Facilities Maintenance Coordinator to feed information back to building occupants and Department Managers. If abnormal consumption is observed, staff would investigate a number of possible influences which could include weather, occupancy changes, hours of operation, and equipment or building maintenance.

Building occupants and department managers are responsible for ensuring that programmable thermostats are programmed with unoccupied time setbacks and making sure no unnecessary electrical loads are left on during non-operational hours.



## Summary of Current Energy Consumption, Cost and Green House Gas Emissions

Summaries of Township energy consumption can be found in the appendices of this document. Appendix A focuses on consumption and the corresponding Green House Gas emissions by account summarized by department. Appendix B contains Township data organized for submission to the Ministry of Energy as required under the Green Energy Act.

### Renewable Energy

The Township of Selwyn aspires to demonstrate leadership in the promotion and development of renewable energy systems that are compatible with asset management plans and land use planning objectives. As a result the Township has explored the development of roof mounted solar photovoltaic systems on Township owned facilities.

In 2012 three (3) 10 kW solar system installations at the Township Office, Bridgenorth Library and Community Hall and the Lakefield Library were completed. There are currently three (3) additional applications before the Ontario Power Authority (OPA) for the installation of larger scale solar installations. The Township should have some direction on these projects from the OPA in Q3 2014.

The chart below summarizes performance of current installations during 2013. Visitors to the Township website are welcome to check on how the solar installations are performing in real time by checking under “Green Initiatives” and clicking on the links available.

### 2013 Solar Generation Summary

Location	Electricity Generated (kWh)	GHG Emissions Avoided (kgs)
Township Office	12,455	1,196
Bridgenorth Library	13,142	1,262
Lakefield Library	12,384	1,189
<b>Grand Totals</b>	<b>37,981</b>	<b>3,647</b>



The current solar installations result in approximately \$30,000 in annual revenue to the Township. These funds are earmarked to support other sustainable initiatives so that the Township can continue to improve environmental initiatives to lead by example and shrink corporate greenhouse gas emissions.

## **Moving Forward**

As an integral component of ongoing operation, the Energy Management Plan will be coordinated with the Township's Strategic Plan, Budget, Purchasing Policy, Preventative Maintenance Plans, Asset Management Plan, and Sustainable Peterborough Plan.

The Energy Management Leader will be the Facilities Maintenance and Special Project Coordinator. The Energy Management Leader has overall responsibility for energy management reporting to the Management Team.

Cooperatively, the Facilities Maintenance and Special Project Coordinator and members of the Management Team may from time to time form task-specific Energy Teams to consider energy efficiencies, operational improvements and capital investments.

Energy consumption accountability will be more prominently incorporated into operational responsibilities to ensure that Department Managers are committed to the plan and related conservation initiatives.

The Township of Selwyn is committed to the following goals and objectives:

### **Goals**

1. To create a culture of conservation throughout our organization including Council, Management and Staff.
2. To implement a comprehensive corporate energy management program to facilitate conservation in all aspects of our activities and delivery of services.
3. To improve the energy efficiency of facilities by utilizing best practices.
4. To continuously improve the energy efficiency of facilities and processes in order to reduce operating costs, reduce energy consumption (intensity) and the resulting greenhouse gas emissions.
5. To increase the reliability and efficiency of energy consuming equipment.



## **Objectives**

### **Leadership and Training**

- The Township will identify key staff members and personnel from contractors and primary service providers who will jointly provide input into decisions related to energy management.
- The Township will incorporate energy efficiency into standard operating procedures and the knowledge requirements for operational jobs.
- The Township will seek out training focused on the energy use and conservation opportunities associated with employees' job functions wherever possible.
- The Township will seek out skills training for operators, maintenance personnel, and other employees that have hands on involvement with energy consuming systems in order to improve the team's ability to achieve energy efficiency improvements.
- The Township will implement a process for staff to submit suggestions for energy efficiency improvements, evaluate and analyze these suggestions, and provide feedback to staff on the final decision.
- Significant savings and incentives garnered from previous projects have been and are continuing to be used to support of other energy efficiency and sustainable initiatives.
- Net revenue from renewable energy generation will be incorporated into annual planning procedures in support of other energy efficiency and sustainable initiatives.

### **Communication and Outreach**

- The Township will develop a communication strategy that creates and sustains awareness of energy efficiency as a corporate priority among all employees and conveys our commitment and progress to our stakeholders.
- The Energy Leader will investigate, document and communicate funding sources for energy projects including government and utility grants and incentives.
- The Township will establish methodologies to measure the results of the various initiatives outlined in this plan.
- The Township of Selwyn is committed to reporting to our stakeholders, both internal and external and meeting the requirements of Provincial legislation. To meet this commitment the Township will:
  - Report annually to the Provincial Ministry of Energy under the requirements of the Green Energy Act. This will include annual reporting of consumption and costs with a 2 year lag (i.e. reporting 2012 data in 2014) and committing to a 5 year update of our Energy Management Plan.





- Report quarterly to the Management Team. Reports will include building level detail and will be summarized by department. Trends will be analyzed and feedback provided.
- Report to Council annually to advise of current trends and progress made on our commitments in the Energy Management Plan.
- Report to the Community using newsletters and publications such as the Council Communicator and Township website to provide updates on our progress.
- Community members will also have access to the Corporate Energy Management Plan and annual update reports on the Township website

### **Procurement and Investments**

- Complete a wholesale replacement of all street lighting throughout the Township switching to LED technology. Electrical energy consumption by street lighting represents about 16% of all electricity that the Township consumes. By switching all street lights to LEDs, it is anticipated that a reduction in consumption associated with street lights of almost 70% will be achieved which represents approximately 288,470 kWh. This single project will reduce operating and maintenance costs and ultimately lower GHG emissions by approximately 28 metric tonnes.
- The Township will establish criteria in the Procurement Policy based on energy goals and objectives for the selection of external consultants and energy suppliers.
- The Township will further develop and clarify the necessary financial indicators that are applied to investment analysis of energy projects. This will help prioritize proposed energy projects and ensure that life cycle cost analysis are incorporated in the design procedures for all energy projects.
- The Township will continue to investigate participating in energy purchasing cooperatives where there are opportunities. These programs exist at both a local level and Provincial level. These opportunities need be examined with not only a focus on cost, but also include quality and reliability in the equation.
- The Township Procurement Policy will be modified as required to incorporate energy efficiency into the criteria for selection and evaluation of materials and equipment.
- The Township will develop criteria for the design and construction of new facilities, that includes energy performance factors and that use as appropriate the principles in performance standards such as LEED.

### **Procedures and Operational Practices**

- Improve the efficiency of energy use through low cost opportunities by implementing or continuing with the following:
  - Continue to audit all facilities always looking for opportunities for improvement.
  - Employ sound operating and maintenance practices at all facilities.





- Utilize benchmarking data to identify buildings with poor energy performance.
- Maintain up to date data analysis so that anomalies can be quickly checked.
- Continue to monitor opportunities for cost savings through fixed price contracts.
- The Township will carry out a comprehensive review of all business processes and modify them as necessary in order to incorporate any energy efficiency considerations.
- The Township will work with its two largest consumers of energy, the Parks & Recreation Department and the Water & Sewer departments to reduce energy consumption. Combined, these two departments represent just over 50% of the energy consumed by the Township.
- The Township will develop a methodology for the internal assessment of energy performance of Township facilities and their energy loads. In addition, a process will be developed for identifying and recording energy efficiency improvements.
- The Township will establish the criteria for energy audits on any municipal facilities. Any energy audits will be carried out based on the developed policy.
- Energy projects will be integrated into our capital planning and budget development procedures.



## Action Items

Objective	Action	Task Owner	Target Completion
Communication and Outreach	Add energy awareness to Management Team meetings. Provide reports on a quarterly basis.	CAO and Manager of Financial Services	Q4 2014 and ongoing
Leadership and Training	Help staff understand the value in energy conservation. Use a poster campaign and submit articles to newsletter.	Facilities Maintenance & Project Coordinator	Q4 2014
Communication and Outreach	Share with all staff the contact info. of Energy Leader and distribute the Energy Management Plan	Facilities Maintenance & Project Coordinator	Q2 2014
Communication and Outreach	Energy Conservation "Suggestion Box". Get employees engaged in the process and consider incentives.	Facilities Maintenance & Project Coordinator	Q1 2015
Procedures and Operational Practices	Similar to Health and Safety inspections, consider Energy Conservation inspections using the Energy Team.	Facilities Maintenance & Project Coordinator	Q2 2015
Procedures and Operational Practices Procurement and Investments	Fleet Preventative Maintenance – review and update program to schedule routine maintenance and inspection of all Township vehicles.	Department Managers in conjunction with mechanics	Start in Q4 2014 and on-going.
Procedures and Operational Practices	Vacuum back and bottom of all fridges and refrigerated vending machines twice annually	Facilities Maintenance & Project Coordinator	Start in Q3 2014 and on-going
Procedures and Operational Practices Procurement and Investments	Schedule dishwashers to run during off peak hours. When replacing dishwashers, make sure delay start feature is included.	Facilities Maintenance & Project Coordinator	Start in Q3 2014 and on-going



Leadership and Training	Emphasize to staff the importance of completely powering down computers at the end of their day	Facilities Maintenance & Project Coordinator	On-going
Procedures and Operational Practices	Turn off (or consider timers) all electronic devices at the end of normal operations such as coffee makers, printers, calculators, phone chargers etc.	Facilities Maintenance & Project Coordinator	Q4 2014
Procurement and Investments	Incorporate life cycle costing into the procurement process	Manager of Financial Services and Management Team	Q2 2015 and on-going
Procurement and Investments	Fleet Replacement Program Long term planning to ensure useful life of vehicles. Assign appropriate equipment for intended use. Consider alternate uses for equipment.	Managers in Public Works, Building & Planning, Parks & Recreation, Fire Department in conjunction with mechanics.	On-going
Procurement and Investments	Fleet Procurement Select vehicle engines and drive trains with better fuel economy Set appropriate specifications to right size equipment	Department Managers in: Public Works, Building & Planning, Parks & Recreation, Fire Department	Q1 2015 and on-going
Procurement and Investments	Investigate installation of “vending misers” on all vending machines to power them off during facility closed hours.	Facilities Maintenance & Project Coordinator	Q1 2015



Procedures and Operational Practices	Continue building audits to improve each “building envelope”. Examine windows, doors, weather stripping, caulking, insulation levels.	Facilities Maintenance & Project Coordinator	On-going
Procedures and Operational Practices	Continue with lighting improvements at all facilities. Upgrade where opportunities exist, use occupancy sensors where appropriate.	Facilities Maintenance & Project Coordinator	On-going
Procurement and Investments	Continue to upgrade HVAC systems where opportunities exist.	Facilities Maintenance & Project Coordinator	On-going
Procurement and Investments  Communications and Outreach	Research the feasibility of using a hybrid or fully electric vehicle for Township use for local meetings, daily errands to bank, post office etc. Use Township and partner branding to promote awareness and Energy Conservation.	Facilities Maintenance & Project Coordinator	Q1 2015
Procurement and Investments	Convert all street lighting in the Township to LED technology	Facilities Maintenance & Project Coordinator	Underway Complete by Q2 2015
Procedures and Oper. Practices  Procurement and Investments	Use energy monitoring devices to identify equipment that is not efficient.	Facilities Maintenance & Project Coordinator	Q1 2015
Procedures and Oper. Practices  Procurement and Investments	Check that all facilities are using programmable thermostats and are programmed with off hour setbacks	Facilities Maintenance & Project Coordinator	Q4 2014
Procurement and Investments	Discuss with regular suppliers the energy efficiency of our current equipment versus the efficiency of new equipment	Facilities Maintenance & Project Coordinator	On-going



## References

County of Peterborough, 2014, Energy Management Plan

Local Authority Services (LAS), 2012, Energy Planning Tool

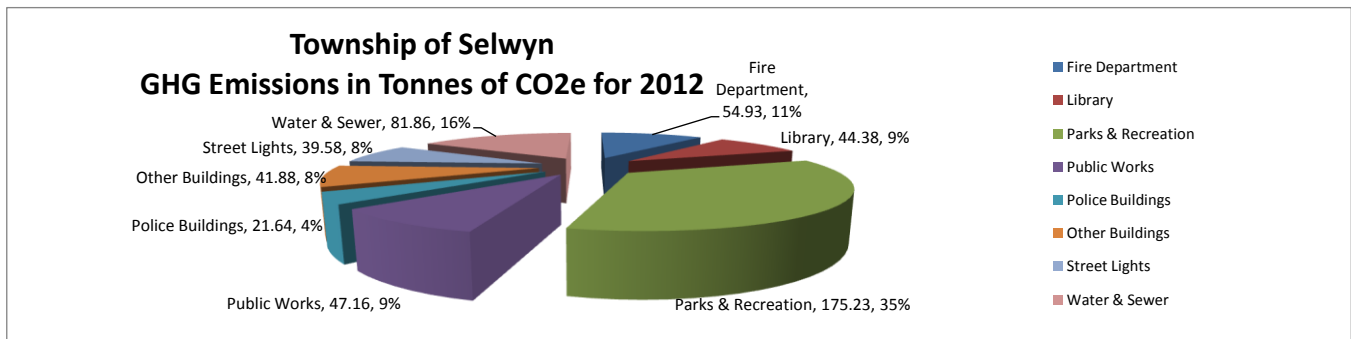
Natural Resources Canada / Local Authority Services (LAS):

- Energy 101: Opportunities and Insights for Municipalities, 2009
- Municipal Energy Management: How to Make it Work for You, 2009.
- Municipal Energy Management: Making it Happen, 2009
- Municipal Energy Performance Benchmarking, 2010
- Dollars to Sense: Energy Management Planning Workshop, 2011

Ontario Ministry of Energy, 2013, A Guide to Preparing Conservation and Demand Management Plans

Sustainable Peterborough, 2012, Greater Peterborough Area Community Sustainability Plan

Facility	Electricity kWh	Natural Gas m3	Furnace Oil litres	Propane litres	Energy ekWh	Building Area m2	Energy Intensity ekWh/m2	GHG Emissions CO2e Tonne
Bridgenorth Fire Hall	23684	5622			83433	542	154	12.90
Lakefield Fire Hall	10000	4930			62395	354	176	10.28
Youngs Point Fire Hall	7496			5487	46072	261	177	9.18
Curve Lake Fire Hall	4145		2797		34290	187	183	8.05
Ennismore Fire Hall	12367	6695			83519	410	204	13.85
Slater's Hall Storage	2				2			0.00
Gore St Well Shed	7011				7011	3	2056	0.67
<b>Total Fire Dept</b>	<b>64,705</b>	<b>17,247</b>	<b>2,797</b>	<b>5,487</b>	<b>316,723</b>	<b>1,757</b>	<b>180</b>	<b>54.93</b>
Bridgenorth Library	39357	5930			102379	483	212	14.99
Lakefield Library	17926	7029			92628	275	337	15.01
Ennismore Library	30339	6064			94785	187	507	14.38
<b>Total Library</b>	<b>87,622</b>	<b>19,023</b>	<b>0</b>	<b>0</b>	<b>289,793</b>	<b>945</b>	<b>307</b>	<b>44.38</b>
Ennismore Recreation Complex	314121	16761			492252	3667	134	61.86
Lakefield Arena	421326	24417			680823	2794	244	86.63
Isabel Morris Park Lakefield	11206				11206	N/A		1.08
Lakefield Marina	40080				40080	82	489	3.85
Douglas Sports Centre	1732				1732	41	42	0.17
Marshland Centre	8234	2130			30871	185	167	4.82
Lakefield Campground and Lights	11361				11361	N/A		1.09
Bridgenorth Community Hall	39357	5930			102379	322	318	14.99
Bridgenorth Beautification	2549				2549	N/A		0.24
Bridgenorth Ball Park	5313				5313	N/A		0.51
<b>Total Parks and Recreation</b>	<b>855,279</b>	<b>49,238</b>	<b>0</b>	<b>0</b>	<b>1,378,566</b>	<b>7,091</b>	<b>194</b>	<b>175.23</b>
Main Public Works Complex	43863			15860	155367	730	213	28.65
Lakefield Works Garage	16416	3901			57875	360	161	8.95
Ennismore Works Garage	16918	3125			50130	348	144	7.53
Landfill Office	16480				16480	43	383	1.58
Landfill Blue Garage					0	N/A		0.00
Ennismore Sand Dome	4535				4535	N/A		0.44
<b>Total Public Works</b>	<b>98,212</b>	<b>7,026</b>	<b>0</b>	<b>15,860</b>	<b>284,386</b>	<b>1,481</b>	<b>901</b>	<b>47.16</b>
826 Ward St. Bridgenorth (OPP office)	10487	1886			30531	189	162	4.57
12 Queen St. Lakefield	25275	7744			107576	545	197	17.07
<b>Total Police Buildings</b>	<b>35762</b>	<b>9630</b>	<b>0</b>	<b>0</b>	<b>138107</b>	<b>734</b>	<b>359</b>	<b>21.64</b>
826 Ward St Bridgenorth	26077				26077	457	57	2.50
Municipal Office	104595			9391	170618	998	171	24.52
Memorial Hall Lakefield	62166	4701			112127	652	172	14.86
<b>Total Other Buildings</b>	<b>192,838</b>	<b>4,701</b>	<b>0</b>	<b>9,391</b>	<b>308,822</b>	<b>2,107</b>	<b>400</b>	<b>41.88</b>
						# of fixtures	kWh/fixture	
Lakefield Streetlights	247858				247858	352	704	23.80
Ennis Street Lights 6 Con Lot 7	9024				9024	15	602	0.87
Pine Valley Estates Streetlights	3696				3696	2	1848	0.35
Bridgenorth Estates Ph 1 Lot 11	34752				34752	40	869	3.34
Bridgenorth Streetlights	36600				36600	42	871	3.52
Streetlights at HQ and Seaforth	3648				3648	2	1824	0.35
Youngs Point Streetlights Con 4	21384				21384	23	930	2.05
Youngs Point Streetlights Con 12	2676				2676	2	1338	0.26
Woodland Acres Streetlights Lot 12	19092				19092	31	616	1.83
6 Con Lot 11 Streetlights	20496				20496	24	854	1.97
West Communication Rd Streetlights	3696				3696	2	1848	0.35
Tyler Court Streetlights	2940				2940	2	1470	0.28
Buckhorn Streetlights	6240				6240	6	1040	0.60
<b>Total Streetlights</b>	<b>412,102</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>412,102</b>	<b>543</b>	<b>759</b>	<b>39.58</b>
Water Street Pumping Station	108452				108452	525245	0.2065	10.42
Lagoon	298803				298803	525245	0.5689	28.70
Lagoon	2886				2886			0.28
Hague Blvd Pumping Station	239				239			0.02
George Street Pumping Station	4301				4301			0.41
Kingdon Avenue Pumping Station	364				364			0.03
Coyle Crescent Pumping Station	1055				1055			0.10
Water Treatment Plant	360720				360720	576393	0.6258	34.64
Rolliston Booster Station	11274				11274			1.08
Water Tower (original standpipe)	4865				4865			0.47
Elevated Water Tower (new in 2012)	11571				11571			1.11
Stewart Drive Pumping Station	187				187			0.02
Woodland Acres	47603				47603	106466	0.4471	4.57
<b>Total Water and Sewer</b>	<b>852,320</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>852,320</b>	<b>1,733,349</b>	<b>0.4917</b>	<b>81.86</b>
						Flow Volume in cubic meters	ekWh/m3	
<b>Grand Totals</b>	<b>2,598,840</b>	<b>106,865</b>	<b>2,797</b>	<b>30,738</b>	<b>3,980,818</b>			<b>507</b>
Units of measure	kWh	m3	litres	litres	ekWh			Tonnes
Product	Electricity	Natural Gas	Furnace Oil	Propane	Energy			CO2e



2012 Selwyn Township Energy Data (Source EPT)

Facility Name	Address	Total Area (m2)	Average Hours/Day	Fuel Types	Consumption	Cost (\$)	Energy (ekWh/yr)	GHG Emissions (kg CO2e/yr)	GHG Intensity (kg CO2e/m2)	Energy Intensity
Facility Primary Type: Office										
Memorial Hall	8 Queen St	326	6.28	NG Elect.	2350.50 m3 31083.00 kWh	961.11 3909.72	24980.59 31083	4443.92 2985.21	13.63 9.16	76.63 (ekWh/m2) 95.35 (ekWh/m2)
Landfill Weigh Scale Office	1480 Eighth Line	43	5.71	Elect.	16480.00 kWh	2698.09	16480	1582.74	36.81	383.26 (ekWh/m2)
Facility Type Total: Office Buildings						7568.92	72543.59	9011.87		
Facility Primary Type: Library										
Bridgenorth Public Library & Community Hall	836 Charles St	483	6.84	NG Elect.	7116.60 m3 47229.00 kWh	2091 6861.98	75633.64 47229	13454.84 4535.87	27.86 9.39	156.59 (ekWh/m2) 97.78 (ekWh/m2)
Lakefield Public Library	8 Queen St	275	4.57	NG Elect.	7029.00 m3 17926.00 kWh	2456.01 2560.56	74702.64 17926	13289.22 1721.61	48.32 6.26	271.65 (ekWh/m2) 65.19 (ekWh/m2)
Ennismore Public Library	551 Ennis Road	187	4	NG Elect.	6064.00 m3 30339.00 kWh	2243.25 4696.19	64446.84 30339	11464.76 2913.76	61.31 15.58	344.64 (ekWh/m2) 162.24 (ekWh/m2)
Facility Type Total: Libraries						20908.99	310277.12	47380.06		
Facility Primary Type: Fire										
Bridgenorth Fire Hall	833 Ward Street	542	5.71	NG Elect.	5622.00 m3 23684.00 kWh	2141.61 3765.48	59749.36 23684	10629.1 2274.61	19.61 4.2	110.24 (ekWh/m2) 43.70 (ekWh/m2)
Lakefield Fire Hall	45 Concession Street	354	1	NG	4930.00 m3	1978.85	52394.94	9320.79	26.33	148.01 (ekWh/m2)
Young's Point Fire Hall	2735 Fitzgerald Road	261	1	Propane Elect.	5487.00 L 7496.00 kWh	2775.47 1429.4	38576.66 7496	8455.38 719.92	32.4 2.76	147.80 (ekWh/m2) 28.72 (ekWh/m2)
Curve Lake Fire Hall	1964 Curve Lake Road	187	1	oil 1&2 Elect.	2797.00 L 4145.00 kWh	2510.89 1014.96	30145.44 4145	7650.23 398.09	40.91 2.13	161.21 (ekWh/m2) 22.17 (ekWh/m2)
Ennismore Fire Hall	801 Tara Road	410	1	NG Elect.	6695.00 m3 12367.00 kWh	2380.58 2213.71	71152.97 12367	12657.75 1187.73	30.87 2.9	173.54 (ekWh/m2) 30.16 (ekWh/m2)
Facility Type Total: Fire Halls						20210.95	299711.37	53293.59		
Facility Primary Type: Police										
OPP Community Policing Office	826 Ward Street	230	1	NG Elect.	1886.00 m3 10487.00 kWh	1286.32 1909.71	20043.99 10487	3565.72 1007.17	15.5 4.38	87.15 (ekWh/m2) 45.60 (ekWh/m2)
Lakefield Police Services Building	12 Queen Street	545	8	NG Elect.	7744.00 m3 25275.00 kWh	2599.89 3712	82301.51 25275	14641.02 2427.41	26.86 4.45	151.01 (ekWh/m2) 46.38 (ekWh/m2)
Facility Type Total: Police Buildings						9507.92	138107.49	21641.32		



Facility Name	Address	Total Area (m2)	Average Hours/Day	Fuel Types	Consumption	Cost (\$)	Energy (ekWh/yr)	GHG Emissions (kg CO2e/yr)	GHG Intensity (kg CO2e/m2)	Energy Intensity
Facility Primary Type: Community Centre										
Bridgenorth Public Library & Community Hall	836 Charles St	322	6.84	NG Elect.	4744.40 m3 31486.00 kWh	1394 4574.65	50422.43 31486	8969.89 3023.92	27.86 9.39	156.59 (ekWh/m2) 97.78 (ekWh/m2)
Marshland Centre	65 Hague Blvd	185	4	NG Elect.	2130.00 m3 8234.00 kWh	1342.78 1344.53	22637.17 8234	4027.04 790.79	21.77 4.27	122.36 (ekWh/m2) 44.51 (ekWh/m2)
Facility Type Total: community Centre						8655.96	112779.59	16811.64		
Facility Primary Type: Recreation Complex										
Douglas Sports Centre	65 Hague Blvd	41	1	Elect.	1732.00 kWh	1029.45	1732	166.34	4.06	42.24 (ekWh/m2)
Facility Type Total: Recreation Building						1029.45	1732	166.34		
Facility Primary Type: Public Works										
Ennismore Public Works Garage	801 Tara Road	348	0.72	NG Elect.	3125.00 m3 16918.00 kWh	1575.69 2768.66	33211.8 16918	5908.21 1624.8	16.98 4.67	95.44 (ekWh/m2) 48.61 (ekWh/m2)
Public Works Main Depot	1280 Centre Line	730	5.72	Propane Elect.	15860.00 L 43863.00 kWh	7539.03 6725.77	111504.6 43863	24440.01 4212.6	33.48 5.77	152.75 (ekWh/m2) 60.09 (ekWh/m2)
Lakefield Public Works Garage	275 Queen Street	360	0.72	NG Elect.	3901.00 m3 16416.00 kWh	1512.79 2228.48	41458.96 16416	7375.34 1576.59	20.49 4.38	115.16 (ekWh/m2) 45.60 (ekWh/m2)
Facility Type Total: Public Works Facilities						22350.42	263372.36	45137.55		
Facility Primary Type: Other										
Memorial Hall	8 Queen St	326	6.28	NG Elect.	2350.50 m3 31083.00 kWh	961.11 3909.72	24980.59 31083	4443.92 2985.21	13.63 9.16	76.63 (ekWh/m2) 95.35 (ekWh/m2)
Lakefield Marina	1 Water Street	82	4	Elect.	40080.00 kWh	4833.44	40080	3849.28	46.94	488.78 (ekWh/m2)
Treasure Trove Thrift Shop and Historical Society	826 Ward Street	416	2.72	Elect.	26077.00 kWh	4040.42	26077	2504.44	6.02	62.69 (ekWh/m2)
Facility Type Total: Other Buildings						13744.69	122220.59	13782.85		
Facility Primary Type: Town Hall										
Township Municipal Office	1310 Centre Line	998	5.71	Propane Elect.	9391.00 L 104595.00 kWh	4700.28 14979.72	66023.94 104595	14471.38 10045.3	14.5 10.07	66.16 (ekWh/m2) 104.80 (ekWh/m2)
Facility Type Total: Municipal Office						19680	170618.94	24516.68		

Facility Name	Address	Total Area (m2)	Average Hours/Day	Fuel Types	Consumption	Cost (\$)	Energy (ekWh/yr)	GHG Emissions (kg CO2e/yr)	GHG Intensity (kg CO2e/m2)	Energy Intensity
Facility Primary Type: Water Treatment Facility										
Sewage - Water St Sewage Plant	Water Street	1	24	Elect.	108452.00 kWh	13421.38	108452	10415.73	10415.73	206.09 (ekWh/ML)
Sewage - Lagoon account #1	Block Road	1	24	Elect.	2886.00 kWh	750.54	2886	277.17	277.17	2886.00 (ekWh/ML)
Sewage - Lagoon account #2	Block Road	1	24	Elect.	298803.00 kWh	33347.59	298803	28697.04	28697.04	567.80 (ekWh/ML)
Sewage - Hague Blvd Sewage Pumping Station	Hague Blvd	1	24	Elect.	239.00 kWh	456.55	239	22.95	22.95	239.00 (ekWh/ML)
Sewage - George St Sewage Pumping Station	George Street	1	24	Elect.	4301.00 kWh	916.58	4301	413.07	413.07	4301.00 (ekWh/ML)
Sewage - Kingdon Ave Sewage Pumping Station	Kingdon Ave	1	24	Elect.	364.00 kWh	470.86	364	34.96	34.96	364.00 (ekWh/ML)
Sewage - Coyle Cres Sewage Pumping Station	Coyle Cres	1	24	Elect.	1055.00 kWh	245.57	1055	101.32	101.32	1055.00 (ekWh/ML)
Water - Water Treatment Plant	Water Street	1	23.86	Elect.	360720.00 kWh	40668.68	360720	34643.55	34643.55	624.74 (ekWh/ML)
Water - Rolliston/Strickland Booster Station	Near corner of Rolliston and Strickland	1	24	Elect.	11274.00 kWh	1715.32	11274	1082.75	1082.75	11274.00 (ekWh/ML)
Water - Strickland St Standpipe and Treatment	Strickland St	1	24	Elect.	4865.00 kWh	984.62	4865	467.23	467.23	4865.00 (ekWh/ML)
Sewage - Stewart Dr Sewage Pumping Station	Stewart Dr	1	24	Elect.	187.00 kWh	451.07	187	17.96	17.96	187.00 (ekWh/ML)
Water - Woodland Acres	Woodland Dr	1	24	Elect.	47603.00 kWh	6110.51	47603	4571.79	4571.79	442.96 (ekWh/ML)
Water - Lakefield Elevated Water Tower	New access road off of Lakefield Rd.	1	24	Elect.	11571.00 kWh	1644.31	11571	1111.28	1111.28	11571.00 (ekWh/ML)
Facility Type Total; Water and Sewer						101183.58	852320	81856.81		
Facility Primary Type: Single-Pad Arena										
Ennismore Arena	553 Ennis Road	3667	5.43	NG Elect.	16761.00 m3 331492.00 kWh	4578.98 42817.21	178132.17 331492	31688.8 31836.49	8.64 8.68	48.58 (ekWh/m2) 90.40 (ekWh/m2)
Lakefield Arena	20 Concession Street	2794	5.43	NG Elect.	24417.00 m3 421326.00 kWh	6113.3 46092.73	259498.43 421326	46163.44 40464.15	16.52 14.48	92.88 (ekWh/m2) 150.80 (ekWh/m2)
Facility Type Total: Single Pad Arena						99602.22	1190448.6	150152.88		

Facility Name	Address	Total Area (m2)	Average Hours/Day	Fuel Types	Consumption	Cost (\$)	Energy (ekWh/yr)	GHG Emissions (kg CO2e/yr)	GHG Intensity (kg CO2e/m2)	Energy Intensity
Facility Primary Type: Streetlights (optional)										
Street Lights - Lakefield	Lakefield	1	10	Elect.	247858.00 kWh	46373	247858	23804.28	23804.28	247858.00 (ekWh/m2)
Street Lights - Ennismore	Ennismore	1	10	Elect.	9024.00 kWh	1325	9024	866.66	866.66	9024.00 (ekWh/m2)
Street Lights - Pine Valley Estates	Bridgenorth	1	10	Elect.	3696.00 kWh	556	3696	354.96	354.96	3696.00 (ekWh/m2)
Street Lights - Bridgenorth Estates Phase 1	Bridgenorth	1	10	Elect.	34752.00 kWh	5387	34752	3337.58	3337.58	34752.00 (ekWh/m2)
Street Lights - Bridgenorth	Bridgenorth	1	10	Elect.	36600.00 kWh	5664	36600	3515.06	3515.06	36600.00 (ekWh/m2)
Street Lights - HQ and Seaforth	Office & Seaforth Cres	1	10	Elect.	3648.00 kWh	529	3648	350.35	350.35	3648.00 (ekWh/m2)
Street Lights - Young's Point Con. 4	Young's Point	1	10	Elect.	21384.00 kWh	3667	21384	2053.72	2053.72	21384.00 (ekWh/m2)
Street Lights - Young's Point Con. 12	Young's Point	1	10	Elect.	2676.00 kWh	360	2676	257	257	2676.00 (ekWh/m2)
Street Lights - Woodland Acres	Woodland Acres	1	10	Elect.	19092.00 kWh	2906	19092	1833.6	1833.6	19092.00 (ekWh/m2)
Street Lights - Chemong Park	Chemong Park	1	10	Elect.	20496.00 kWh	2853	20496	1968.44	1968.44	20496.00 (ekWh/m2)
Street Lights - Bridgenorth Estates Phase 2	Bridgenorth	1	10	Elect.	3696.00 kWh	521	3696	354.96	354.96	3696.00 (ekWh/m2)
Street Lights - Tyler Court	Tyler Court - Fife's Bay	1	10	Elect.	2940.00 kWh	404	2940	282.36	282.36	2940.00 (ekWh/m2)
Street Lights - Buckhorn	Buckhorn - before the bridge	1	10	Elect.	6240.00 kWh	897	6240	599.29	599.29	6240.00 (ekWh/m2)
Facility Type Total						71442	412102	39578.28		

Grand Total	Cost (\$)	Energy (ekWh/yr)	GHG Emissions (kg CO2e/yr)
	395885.1	3946233.66	503329.87