



2014-2020

Municipality of McDougall



5 Year Energy Conservation & Demand Management

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1.0 Commitment

Declaration of Commitment: As per C.A.O. directive, McDougall will allocate the necessary resources to develop and implement a strategic energy management plan that will reduce energy consumption and its related environmental impact.

Vision: McDougall will exercise stewardship in its use of finite energy resources to demonstrate leadership, optimize delivery of services, and enhance the overall quality of life in the community.

Goals: To continuously improve the energy efficiency of the Municipality's facilities and processes in order to reduce operating costs, energy consumption and the associated greenhouse gas emissions.

Overall Target: The Municipality will reduce consumption of fuels and electricity in all operations by an average of 1.5% per year between now and 2020.

Objectives: The creation of a culture of conservation within the Corporation will serve to reduce:

- Greenhouse gas emissions and ensure the wise use of resources.
- Fiscal accountability through savings and cost avoidance will lead to both direct and indirect savings.
- Demonstrate energy management leadership and commitment within the Corporation and community.
- Demonstrate sound operating and maintenance practices.
- Provide a forum for discussion within the Corporation on energy management to explore new ideas and trends.

2.0 Organizational Understanding

Summary of Current Energy Consumption, Cost and GHGs: The total annual energy consumption in municipal operations is 648,909.32ekWh/yr in 2012, at a cost of approx. \$97,000 per year and GHG emission of 99,562.53 tonnes/year eCO₂.

Renewable Energy Utilized or Planned: The Municipality of McDougall aspires to show leadership in the promotion and development of renewable energy systems that are compatible with the corporate asset management and land use planning objectives. As a result, McDougall will investigate the potential to develop solar photovoltaic systems on the rooftops of all corporate facilities with sound, south-facing roofs.

Past Energy Initiatives: The Municipality of McDougall has implemented several energy reducing initiatives in the past including:

- Street light retrofits at key locations

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- Addition of solar power compactors at the Landfill in partnership with Waste Diversion Ontario's Continuous Improvement Fund
- Insulation upgrades to the Public Works building
- Lighting retrofit at the Administration building as part of Hydro One's Save on Energy program
- Furnace replacement at the Administration building

3.0 Resources Planning

Energy Leader: The C.A.O. is designated as leader of energy planning and has been given overall responsibility for corporate energy management.

4.0 Projects Execution

Municipal Level: McDougall 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 responsibility of the C.A.O. however, since everyone uses energy in their daily activities, it will also be the responsibility of all Municipal staff to be aware of their energy use and work towards conservation. Through staff engagement and web based energy management tools, staff will be able to see the results of their efforts, and benchmark between corporate facilities and with industry standards.

Asset Level: McDougall will use department and facility management representatives to facilitate the implementation of facility level business 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 facility management staff have the lead responsibility in ensuring Municipal facilities operate efficiently, all Municipal 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.

5.0 Review

Energy Plan Review: Senior Management will review and evaluate McDougall's energy plan, revising and updating it as necessary, on an annual basis within the corporate planning process.

6.0 Evaluation Progress

Energy Consumption: The Municipality's energy consumption in 2012 was reduced to 648,909.32ekWh/yr from 2011 levels of 669,607.21ekWh/yr.

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7.0 Energy Consumption and GHG Emissions

From: 2012-01-01 to: 2012-12-31

Facility Name	Address	Total Area (m2)	Hours/Day	Fuel Types	Consumption	Cost (\$)	Energy (ekWh/yr)	GHG Emissions (kg CO2e/yr)	GHG Intensity (kgCO2e/m2)	Energy Intensity (ekWh/m2)
Facility Primary Type: Office										
Administration Office	5 Barager Blvd	317	5.71	Elect.	56,487 kWh	8,763.75	56,487.00	5,537.99	17.47	178.19
Facility Type Total						8,763.75	56,487.00	5,537.99		
Facility Primary Type: Fire										
Ferguson Fire Hall	Concession A Lot 3	234	0.71	oil 1&2	2,882 L	3,202.61	31,061.55	7,882.72	33.69	132.74
				Elect.	9,268 kWh	2,015.00	9,268.00	908.63	3.88	39.61
McDougall Fire Hall	10 Municipal Dr	580	5.71	oil 1&2	2,330 L	2,527.65	25,112.22	6,372.91	10.99	43.30
				Elect.	42,618 kWh	15,481.60	42,618.00	4,178.27	7.20	73.48
Facility Type Total						23,226.86	108,059.77	19,342.54		
Facility Primary Type: Community Centre										
Waubamik Hall	Concession B Lot 2	384	1.14	oil 1&2	2,871 L	3,085.16	30,943.00	7,852.63	20.45	80.58
				Elect.	6,164 kWh	2,175.09	6,164.00	604.32	1.57	16.05
McDougall Recreation Complex	148 Hammel Ave	1764	8.00	Elect.	56,266 kWh	8,177.15	56,266.00	5,516.32	3.13	31.90
Facility Type Total						13,437.40	93,373.00	13,973.27		
Facility Primary Type: Public Works										
Public Works Building	8 Municipal Drive	730	5.71	oil 1&2	13,331 L	14,514.95	143,678.55	36,462.36	49.95	196.82
				Elect.	40,750 kWh	6,205.63	40,750.00	3,995.13	5.47	55.82
Crawford Septic Building	8 Parkway Ave	9	24.00	Elect.	1,935 kWh	748.64	1,935.00	189.71	21.08	1,935.00
Water Treatment Plant	8B Parkway Ave	23	24.00	Elect.	2,283 kWh	788.09	2,283.00	223.83	9.73	2,283.00
Water Pumping Station	1A Murray Point Rd	45	24.00	Elect.	8,647 kWh	1,616.61	8,647.00	847.75	18.84	8,647.00
McDougall Landfill	214 McDougall Rd	207	24.00	Elect.	193,696 kWh	28,243.05	193,696.00	18,989.96	91.74	193,696
Facility Type Total						52,116.97	390,989.55	60,708.74		
Grand Total:						97,544	648,909	99,562.53		

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8.0 Programs

Description	Facility	Contact	Date	Status
Energy Awareness at Management Meetings	All facilities	Dave Rushton	2014-07-01	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 improvements and ways to reduce energy use.			
Employee Participation Program	All facilities	Dave Rushton	2014-07-01	Active
Details	Invite employees from all departments of the Municipality to recommend ideas to reduce energy use in their departments.			
Energy Accounting	All facilities	Erin Gignac-Robinson	2014-07-01	Active
Details	Monthly utility usage and costs should be monitored to identify trends and emphasize anomalies to better predict future usage requirements.			
Efficiency Standards	All facilities	Dave Rushton	2014-07-01	Active
Details	<p>Standards of performance will be developed to identify and implement temperature regulations for each building for the following:</p> <ul style="list-style-type: none"> • 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	Erin Gignac-Robinson	2014-07-01	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 asset's that use less kWh or are Energy Star rated.			
After hours Lights Out	All facilities	Dave Rushton	2014-07-01	Active
Details	The Municipality 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	Dave Rushton	2014-07-01	Active
Details	Host annual Lunch and Learns for key staff and management to learn more about energy savings and available programs.			

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9.0 Processes

Description	Facility	Contact	Date	Status
Enhance Building Envelopes	Administration Office, Waubamuk Hall, Fire Halls 1 & 2	Dave Rushton	2014-07-01	Active
Details	Four Municipal buildings have been identified as critical in terms of heating and cooling energy consumption. These building 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	Erin Gignac-Robinson	2014-07-01	Active
Details	Energy reports will be produced annually for management review and reduction analysis using the L.A.S. E.P.T online software.			
Soft Drink Machine Retrofit	McDougall Recreation Centre	Dave Rushton	2014-07-01	Active
Details	The soft drink machine at the Recreation Centre and any additional vending machines will be converted to energy efficient machines.			
Join Energy Organization	All facilities	Dave Rushton	2014-07-01	Active
Details	C.A.O. Dave Rushton will join an energy conservation organization to bring new energy planning ideas and trends to Management and Council meetings.			
Annual Parry Sound Area Municipal Leaders Energy Savings Luncheon	All facilities	Dave Rushton	2014-07-01	Active
Details	The Municipality of McDougall will host an annual "Power Lunch" to discuss how energy is being managed in the neighbouring Municipalities to identify trends and joint saving opportunities.			
Energy Planning at Management Meetings	All facilities	Dave Rushton	2014-07-01	Active
Details	Energy planning will be added to discussions at Manager Meetings to reduce consumption and increase cost savings.			

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10.0 Projects

Description	Facility	Contact	Date	Status
Enhance Building Envelopes	Administration Office, Waubamuk Hall, Fire Halls 1 & 2	Dave Rushton	2014-07-01	Active
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