



Energy Conservation and Demand Management Plan

2014-2019

June 2014



United Counties of
Stormont Dundas Glengarry
Corporate Services
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To whom it may concern:

Re: SDG Conservation and Demand Management Plan 2014-2019

This letter serves as confirmation that SDG's Conservation and Demand Management Plan has been jointly developed and approved by the County's senior management team, and completed in accordance with Ontario Regulation 397/11 of the Green Energy Act.

Sincerely,

T.J. Simpson
Chief Administrative Officer

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Introduction

The United Counties of Stormont, Dundas and Glengarry (SDG) has developed this plan in accordance with Ontario Regulation 397/11 of the Green Energy Act. This regulation requires that the broader public sector (municipalities, municipal service boards, school boards, hospitals, universities and colleges) report on greenhouse gas emissions and energy consumption annually. Further, it requires the development and implementation of five year Conservation and Demand Management (CDM) plans commencing July 1, 2014.¹ CDM plans must be endorsed by the public organization's senior management.

Plan Goals and Objectives

Policy Statement

Senior management of the United Counties of Stormont, Dundas and Glengarry will make reasonable efforts to comply with the spirit and intent of Ontario Regulation 397/11 of the Green Energy Act. SDG's CDM plan is recognized by senior staff as a living document, and will be implemented using the principle of continuous improvement with due consideration for internal/external factors that may arise throughout its duration.

Goals and Corporate Reduction Target

The goal of SDG's CDM plan is to pursue practical administrative solutions to mitigate increasing energy costs through conservation, as well as the overall environmental impact (GHG emissions) of County operations.

SDG will strive to reduce its corporate energy consumption by five percent over the duration of this plan, based on its 2011 baseline.² Corporate energy consumption includes electricity, natural gas, and propane.

Objectives

SDG's CDM plan will strive to achieve the following objectives, which have been aligned with the above stated goals. SDG will:

1. Strive for energy efficiency across County facilities;
2. Monitor and report to departments on energy consumption annually;
3. Better analyze energy costs for savings; and
4. Raise staff and council awareness around energy efficiency.

Current Energy Consumption Baseline

SDG currently reports its energy consumption and GHG emissions annually using the AMO/LAS Energy Planning Tool, and in accordance with Ontario Regulation 397/11.

Energy consumption and GHG emissions for 2011 have been reproduced (see Appendix A), and will serve as a baseline for this plan.

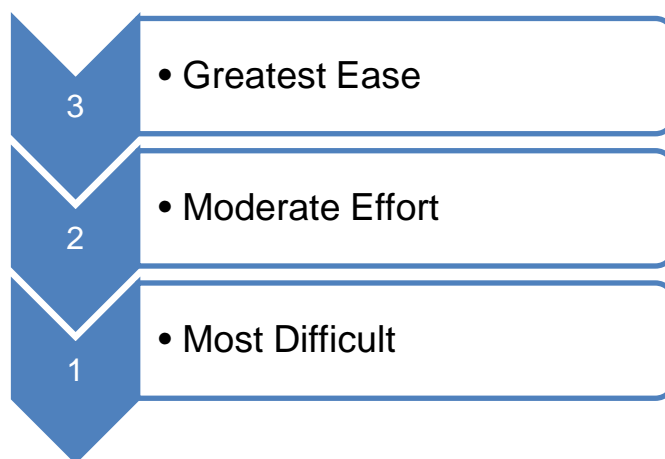
Proposed Measures

The County has taken proactive steps over the last five years to put in place practices and undertake capital projects to reduce energy costs and consumption. This includes the encouragement of carpooling, installing new windows in aging facilities, evaluating fuel economy in consideration of new corporate vehicles, and installing new high efficiency air conditioning units.

SDG will endeavour to achieve its corporate reduction target by continuing to implement practical, cost effective measures. Proposed measures under this plan include technical (capital), behavioural (staff engagement), and organizational (policies) initiatives. These have been captured under two sections: administrative initiatives and projects/capital investments.

Prioritization

Each measure identified below will be prioritized based on ease of implementation.



Administrative Initiatives

Description	Facility/Departments	Savings/Year (Est. \$)	Start	End	Status	Priority
Asset Disposal	All Departments	TBD	2013	2019	In Progress	1
Comments	SDG will investigate opportunities to dispose of underutilized assets to reduce energy consumption and costs. An example of this, the Glengarry Registry Office, was sold to the Township of North Glengarry in 2013.					
Power Management	All Departments	~\$1000	2015	2019	0%	3

Comments	Ensure IT infrastructure (computer monitors, hardware) is defaulted to factory energy management settings. Encourage staff to power-down work stations at the end of business and on weekends. Ensure lights are turned off when rooms are not in use. Unplug power bars to reduce phantom power wherever possible outside of regular business hours. Investigate the installation of programmable thermostats. Share energy consumption reports with Department Heads on a regular basis to observe trends, identify areas of high usage, and develop strategies. Investigate opportunities to replace appliances with newer, energy efficient technology (such as refrigerators, microwaves, etc.).					
Procurement	All Departments	TBD	2015	2019	0%	2
Comments	SDG will investigate opportunities to implement policy changes that incorporate energy efficiency into selection criteria for various equipment and materials.					

Projects/Capital Investments

Description	Facility/Departments	Estimated Cost	ROI (Years)	Savings/Year (Est. \$)	Start	End	Status	Priority
LED Streetlight Conversion	Roads Department	\$55,000	<2	~\$30,000	2014	2019	In Progress	3
Comments	SDG will convert its streetlight inventory (110 units) from high-pressure sodium to LED. Estimated savings takes into account both energy costs and operating.							
Garage Door Replacements	Patrol Garages	\$80,000	35	~\$2,250	2015	2019	In Progress	2
Comments	Replace on average five garage doors per year through to 2019. There are 20 doors remaining that require replacement (heated bays only).							
Window Replacements	Patrol Garages and Police Detachments	\$25,000	TBD	-	2013	2019	In Progress	2
Comments	SDG will incorporate window replacements into renovation plans at facilities where feasible. Window replacements were completed at the Morrisburg Registry Office in 2013.							

Implementation

Departmental Responsibilities

Initiatives that have been identified by this plan will be budgeted for accordingly by the appropriate business unit, as determined by the County's senior management team.

Ongoing Business Practices

Business practices and procedures will be modified as necessary if opportunities are identified for energy efficiency considerations.

Five Year Evaluation

SDG's Energy Conservation and Demand Management Plan will be reviewed and evaluated every five years, in accordance with Ontario Regulation 397/11. The next review will commence in Q1, 2019.

Confirmation of Approval

This plan has been endorsed by SDG's executive management team, and provided to County Council as information, June 2014.

Availability of Plan to the Public

As per Ontario Regulation 397/11, SDG's CDM plan is publicly available via its corporate website (www.sdgcounties.ca), its corporate intranet site, and in printed form at the County Administration Building, Cornwall, Ontario.

Compliance Checklist

It is noted by the Ministry of Energy that no template has been prescribed to complete CDM plans. Instead, the following checklist has been made available and is reproduced below to confirm the County's compliance with the spirit and intent of Ontario Regulation 397/11.³

- Information on the public agency's annual energy consumption during the last year for which complete information is available for a full year. – **Included**
- The public agency's goals and objectives for conserving and otherwise reducing energy consumption and managing its demand for energy. – **Included**
- The public agency's proposed measures under its energy conservation and demand management plan. – **Included**
- Cost and saving estimates for its proposed measures – **Included**
- The estimated length of time the public agency's energy conservation and demand management measures will be in place. – **Included**
- A description of any renewable energy generation facility operated by the public agency and the amount of energy produced on an annual basis by the facility. – **Not applicable**
- Confirmation that the energy conservation and demand management plan has been approved by the public agency's senior management – **Included**
- The CDM plan has been made publically available by: publishing it on the public agency's website (if there is one); publishing it on the public agency's intranet site (if there is one); and making it available to the public in printed form at the head office. – **Complete**

Appendix A: Reported Energy Consumption, 2011

Facility Name	Address	Total Area (m2)	Average Hrs/Day	Fuel Types	Consumption	Cost (\$)	Energy (ekWh/yr)	GHG Emissions (kg CO2e/yr)	GHG Intensity (kg CO2e/m2)	Energy Intensity
Facility Primary Type: Office										
United Counties SDG	26 Pitt Street	3189	4.99	NG	21641.00 m3	10192.77	229995.75	41066.40	12.88	72.12 (ekWh/m2)
				Elect.	260913.67 kWh	31695.88	260913.67	20873.09	6.55	81.82 (ekWh/m2)
Morrisburg Registry Office	18 Fifth Street	135	5.00	NG	4452.00 m3	2431.41	47314.86	8448.20	62.58	350.48 (ekWh/m2)
				Elect.	24760.00 kWh	3879.20	24760.00	1980.80	14.67	183.41 (ekWh/m2)
Alexandria Registry	63 Kenyon Street	112	0.14	NG	3850.00 m3	2142.98	40916.94	7305.84	65.23	365.33 (ekWh/m2)
				Elect.	1578.00 kWh	723.13	1578.00	126.24	1.13	14.09 (ekWh/m2)
Finch Garage / Shop	70 Front Street	398	5.71	NG	6401.83 m3	2935.87	68037.25	12148.25	30.52	170.95 (ekWh/m2)
				Elect.	21420.87 kWh	3415.66	21420.87	1713.67	4.31	53.82 (ekWh/m2)
Alexandria Building - Greenfield	624 Main Street S	232	5.71	NG	5958.00 m3	2667.12	63320.30	11306.02	48.73	272.93 (ekWh/m2)
				Elect.	47988.00 kWh	7898.85	47988.00	3839.04	16.55	206.84 (ekWh/m2)
Green Valley Garage - Office & Lunch Room	3928 Highway 34	59	5.71	NG	3523.00 m3	2212.48	37441.66	6685.32	113.31	634.60 (ekWh/m2)
				Elect.	3699.00 kWh	598.41	3699.00	295.92	5.02	62.69 (ekWh/m2)
Winchester Springs - Office and Lunch room	12133 Oak Valley Rd	102	5.71	Elect.	9835.00 kWh	1661.05	9835.00	786.80	7.71	96.42 (ekWh/m2)
Facility Type Total:						72454.81	857221.3	116575.58		

Facility Primary Type: Library										
Williamstown Library	19692 William Street	161	2.85	oil 1&2	4867.00 L	5332.56	52455.44	9367639.23	58184.09	325.81 (ekWh/m2)
				Elect.	13015.00 kWh	2525.02	13015.00	1041.20	6.47	80.84 (ekWh/m2)
Facility Type Total:						7857.58	65470.44	9368680.43		
Facility Primary Type: Museum										
United Counties SDG	26 Pitt Street	611	4.99	NG	4146.33 m3	1952.90	44066.29	7868.16	12.88	72.12 (ekWh/m2)
				Elect.	49990.04 kWh	6072.81	49990.04	3999.20	6.55	81.82 (ekWh/m2)
Facility Type Total:						8025.70	94056.34	11867.37		
Facility Primary Type: Police										
Alexandria Building - OPP	624 Main Street S	278	24.00	NG	7266.00 m3	3259.82	77221.43	13788.11	49.6	277.77 (ekWh/m2)
				Elect.	58652.00 kWh	9654.14	58652.00	4692.16	16.88	210.98 (ekWh/m2)
Facility Type Total:						12913.96	135873.43	18480.27		
Facility Primary Type: Other										
United Counties SDG	26 Pitt Street	53	4.99	NG	359.67 m3	169.40	3822.44	682.51	12.88	72.12 (ekWh/m2)
				Elect.	4336.29 kWh	526.77	4336.29	346.90	6.55	81.82 (ekWh/m2)
St Andrews Garage - Office & Lunch Room	17368 Kings Road	353	5.71	Elect.	19282.00 kWh	3340.50	19282.00	1542.56	4.37	54.62 (ekWh/m2)
Green Valley Garage - Truck Storage / Wash Bay	3928 Highway 34	387	5.71	NG	15965.35 m3	6856.26	169676.17	30296.17	78.28	438.44 (ekWh/m2)
				Elect.	26034.55 kWh	4225.57	26034.55	2082.76	5.38	67.27 (ekWh/m2)
Green Valley Garage - Truck Storage / Wash Bay	3928 Highway 34	97	5.71	NG	4001.65 m3	1718.49	42528.65	7593.61	78.28	438.44 (ekWh/m2)
				Elect.	6525.45 kWh	1059.12	6525.45	522.04	5.38	67.27 (ekWh/m2)

Finch Garage / Shop	70 Front Street	398	5.71	NG	6401.83 m3	2935.87	68037.25	12148.25	30.52	170.95 (ekWh/m2)
				Elect.	21420.87 kWh	3415.66	21420.87	1713.67	4.31	53.82 (ekWh/m2)
Winchester Springs Garage	12133 Oak Valley Road	110	5.71	Propane	3761.57 L	2735.51	26445.92	5807.80	52.80	240.42 (ekWh/m2)
				Elect.	5304.19 kWh	895.66	5304.19	424.34	3.86	48.22 (ekWh/m2)
Winchester Springs Garage	12133 Oak Valley Road	604	5.71	Propane	20654.43 L	15020.43	145212.12	31890.11	52.8	240.42 (ekWh/m2)
				Elect.	29124.81 kWh	4917.97	29124.81	2329.98	3.86	48.22 (ekWh/m2)
St Andrews Garage - Shop & Wash Bay	17368 Kings Road	226	5.71	NG	3266.30 m3	1082.95	34713.51	6198.20	27.43	153.60 (ekWh/m2)
				Elect.	5441.67 kWh	952.82	5441.67	435.33	1.93	24.08 (ekWh/m2)
St Andrews Garage - Shop & Wash Bay	17368 Kings Road	1168	5.71	NG	16880.70 m3	5596.82	179404.32	32033.15	27.43	153.60 (ekWh/m2)
				Elect.	28123.33 kWh	4924.29	28123.33	2249.87	1.93	24.08 (ekWh/m2)
Facility Type Total:						60374.09	815433.53	138297.25		
Facility Primary Type: Storage Facility										
Finch Garage / Shop	70 Front Street	698	5.71	NG	11227.33 m3	5148.83	119321.61	21305.21	30.52	170.95 (ekWh/m2)
				Elect.	37567.26 kWh	5990.28	37567.26	3005.38	4.31	53.82 (ekWh/m2)
Facility Type Total:						11139.11	156888.87	24310.60		
Grand Total:						172765.26	2124943.90	9678211.49		

References and Notes

¹ "Introduction and Background," *A Guide to Preparing Conservation and Demand Management Plans*, (Ministry of Energy, 2013), 1.

² Consumption as reported annually (O.Reg 397/11).

Corporate Energy Management Plan – Draft, City of Burlington, March 2013

Energy Conservation and Demand Management Plan, Brock University Facilities Management

Energy Management Plan, County of Peterborough, February 2013

Sample Energy Conservation and Demand Management Plan, LAS Energy Planning Tool

³ "Appendix B: CDM Plan Checklist," *A Guide to Preparing Conservation and Demand Management Plans*, (Ministry of Energy, 2013), 29.