



COUNTY OF RENFREW
ENERGY MANAGEMENT PLAN
June 2014

Energy Management Plan

County of Renfrew

2014

Commitment

- **Declaration of Commitment:** Council Resolution: We will allocate the necessary resources in a fiscally responsible method to develop and implement a strategic energy management plan that will reduce our energy consumption and its related environmental impact.
- **Vision:** The Corporation will continue to reduce energy consumption and mitigate costs through the wise use of energy. This will involve a collaborative effort to increase the education, awareness and understanding of energy management within the Corporation. This vision can be achieved through the integration of energy efficiency facility infrastructure, operational efficiencies and building the foundation for a culture of energy awareness and knowledge within the Corporation.
- **Goals:** To continuously improve the energy efficiency of our facilities and processes in order to reduce our operating costs, our energy consumption and the concomitant greenhouse gas emissions and to increase the comfort and safety of staff and users of County of Renfrew facilities.
- **Overall Target:** We will reduce our consumption of fuels and electricity in all municipal operations by an average of 1% per year between now and 2020.
- **Objectives:** 1. Implement energy audits of facilities during the next 5 years. 2. Implement sound operating and maintenance practices. 3. Employee training and staff awareness on energy practices. 4. Energy Procurement through fixed rate contracts. 5. Monthly monitoring, tracking and staff awareness of energy costs.

Organizational Understanding

- **Stakeholder Needs:** Internal stakeholders (Council, CAO, staff) need to be able to clearly communicate the corporate commitment to energy efficiency, and to develop the skills and knowledge required to implement energy management practices and measures. External stakeholders (the Province, community citizens and groups) need the municipality to be accountable for energy performance and to minimize the energy component of the costs of municipal services.
- **Summary of Current Energy Consumption, Cost and GHGs:** The current energy usage by building is detailed in the attached spreadsheet. (Appendix A) 2012 energy consumption, cost and GHG emissions.
- **Renewable Energy Utilized or Planned:** The County of Renfrew aspires to show leadership in the promotion and development of renewable energy systems that are compatible with our asset management and land use planning objectives. A solar rooftop photovoltaic system is presently being installed on a facility and future opportunities will be explored.

Strategic Planning

- **Links with other municipal plans:** As an integral component of the management structure, the energy management plan is coordinated with the municipality's budget planning process, preventative maintenance plans, environmental management plan, and the overall asset management plan.

Structure Planning

- **Staffing requirements and duties:** We will incorporate energy efficiency into standard operating procedures and the knowledge requirements for operational jobs.

- **Consideration of energy efficiency for all projects:** We will incorporate life cycle cost analysis into the design procedures for all capital projects.

Resources Planning

- **Energy Leader:** Manager of Real Property under the direction of the Director of Development & Property will be responsible for Corporate Energy Management
- **Energy Team:** Facility Managers with responsibility for the various facilities will be part of the Energy Team.
- **Key Individuals:** We will identify staff members and personnel from our critical service providers who carry significant responsibility for energy performance or who can make essential input to energy management processes.
- **Internal Resources:** We will develop criteria for determining whether internal resources can be utilized for the implementation of energy projects.
- **External Consultants and Suppliers:** We will establish criteria based on our energy goals and objectives for the selection of external consultants and energy suppliers.
- **Energy Training:** We will develop and deliver energy training for relevant staff. This training will not be limited to operators and maintainers with "hands-on" involvement with energy consuming equipment but will also include others since they also make energy consumption decision in their daily work. Training focused on the energy use and conservation opportunities associated with employee's job functions will be utilized whenever possible.

Procurement Planning

- **Energy Purchasing:** We will develop a procedure for the negotiation of energy purchase contracts that appropriately addresses our cost considerations, available energy services, energy quality and reliability, and other performance factors.
- **Consideration of energy efficiency for all projects:** We will incorporate life cycle cost analysis into the design procedures for all capital projects.
- **Consideration of energy efficiency of acquired equipment:** Our purchasing procedures will be modified as required to incorporate energy efficiency into the criteria for selection of materials and equipment.

Implementation Planning

- **Building Standards:** We will develop criteria for the design and/or acquisition of new buildings that include energy performance factors and that use as appropriate the principles embedded in performance standards such as LEED and the Model National Energy Code for Buildings
- **Communication Programs:** We 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.

Projects Execution

- **Municipal Level:** We will carry out the required development of business procedures and communication programs and implement them methodically according to the planned time lines within the resources constraints that apply.
- **Asset Level:** We use department and facility energy team representatives to facilitate the implementation of facility level business procedures and communication initiatives, including energy performance reporting.

Review

- **Energy Plan Review:** We will review and evaluate our energy plan, revising and updating it as necessary, on an annual basis within our corporate planning process.
- **Discussion of Progress:** We will correlate our progress towards corporate goals and objectives, and update those goals and objectives accordingly.

Evaluation Progress

- **Energy Consumption:** Annual reporting of energy consumptions and costs will be reported to the County of Renfrew Green Operations and Asset Management Committee as well as annual reporting to meet the requirements for the Green Energy Act.
- **Cost:** Ongoing monthly monitoring and targeting of energy consumptions and costs will be implemented and maintained as an integral component of our management information system.

Programs

Description	Facility	Contact	Date	Status
Add energy awareness to staff meetings	County Admin Building	Kevin Valiquette, Manager of Real Property Assets	2014-07-01	Active
Details	Monthly review of energy programs and opportunities for savings at department meeting.			
Creation of Green Team	County Admin Building	Kevin Valiquette, Manager of Real Property Assets	2014-05-23	Active
Details	Creation of Green Team consisting of front line staff to review day to day operations for energy savings.			
Posting of Energy Consumptions and Costs	Renfrew County Place	Kevin Valiquette, Manager of Real Property Assets	2014-05-23	Active
Details	Post Energy Consumption and Costs in facilities for Maintenance Staff to review and to create an awareness of cost implications.			
Development of Preventative Maintenance programs for facilities	County Admin Building	Kevin Valiquette, Manager of Real Property Assets	2014-01-01	Active
Details	Ongoing development and review of cost effective preventative maintenance programs for facilities.			

Processes

Description	Facility	Contact	Start	End	Status	Cost	Save (ekWh/yr)	Save (\$)	ROI
Have staff from various departments walk through facility to identify areas of energy waste.	County Admin Building	Kevin Valiquette, Manager of Real Property Assets	2014-06-02	2015-06-01	Active [0%]	0.00	0	500.00	0
Details									
Internal Audit by Facility Manager	Renfrew County Place	Kevin Valiquette, Manager of Real Property Assets	2014-07-01	2015-07-01	Active [0%]	0.00	0	500.00	0
Details	Internal energy audit of all buildings by Facility Manager								
Electronic Equipment review after hours	County Admin Building	Kevin Valiquette, Manager of Real Property Assets	2014-06-30	2015-07-01	Active [0%]	0.00	0	500.00	0
Details	Review procedures with IT Department for turning off electronic equipment after hours.								

Projects

Description	Facility	Contact	Start	End	Status	Cost	Save (ekWh/yr)	Save (\$)	ROI
Building Automation System Phase 1	Renfrew County Place	Kevin Valiquette, Manager of Real Property Assets	2012-05-16	2012-07-31	Completed [100%]	8768.00	0	0.00	0
Details	Phase 1 of Building Energy Automation System implemented.								
Building Automation System	Barry's Bay Paramedic Base	Kevin Valiquette, Manager of Real Property Assets	2013-10-01	2014-05-23	Active [100%]	3500.00	0	700.00	5
Details									
Building Automation System	Deep River Paramedic Base	Kevin Valiquette, Manager of Real Property Assets	2013-11-01	2014-05-23	Active [100%]	3500.00	0	700.00	5
Details	Building Automation System to control HVAC components								
SaveONenergy Home Assistance	RCHC	,	2014-01-01	2014-05-29	Completed [100%]	0.00	127931	18805.00	1
Details	Participation in the saveONenergy Home Assistance Program in partnership with Local Distribution companies.								
Building Automation System Phase 2	Renfrew County Place	Kevin Valiquette, Manager of Real Property Assets	2013-09-30	2013-11-29	Active [100%]	25000.00	0	4000.00	6
Details	Installation of Building Automation system for HVAC controls								

Energy Consumption and GHG Emissions
 From: 2012-01-01 To: 2012-12-31

SCHEDULE "A"

Facility Name	Address	Total Area (m2)	Average Hours/D:	Fuel Types	Consumption	Cost (\$)	Energy (ekWh/yr)	GHG Emissions (k)	GHG Intensity (kg Energy Intensity
Facility Primary Type: Office									
County Admin Bui	9 International Dri	4601	5.72	NG	56852.00 m3	17248.09	604210.38	107485.93	23.36 131.32 (ekWh/m2)
				Elect.	849977.00 kWh	96432	849977	81631.79	17.74 184.74 (ekWh/m2)
Renfrew County P	450 O'Brien Rd	3658	5.72	NG	41160.00 m3	13824.51	437439.3	77818.21	21.27 119.58 (ekWh/m2)
				Elect.	502080.00 kWh	53487.15	502080	48219.76	13.18 137.26 (ekWh/m2)
80 McGonigal	80 McGonigal St.	492	5.72						
Facility Type Total						180991.75	2393706.68	315155.69	
Facility Primary Type: Emergency Medical Services									
Arnprior Paramed	91 Meehan Steet	268	24	NG	6446.00 m3	2946.82	68506.65	12186.98	45.47 255.62 (ekWh/m2)
				Elect.	23928.00 kWh	2730.65	23928	2298.05	8.57 89.28 (ekWh/m2)
Petawawa Param	170 Civic Centre R	301	24	NG	4241.00 m3	2289.68	45072.4	8018.15	26.64 149.74 (ekWh/m2)
				Elect.	30627.00 kWh	4183.81	30627	2941.42	9.77 101.75 (ekWh/m2)
Barry's Bay Param	18 Billings Street	301	24	Propane	6550.00 L	3131.17	46050.14	10093.45	33.53 152.99 (ekWh/m2)
				Elect.	20386.00 kWh	2748.32	20386	1957.87	6.5 67.73 (ekWh/m2)
Deep River Param	37 Banting Drive	301	24						
Facility Type Total						18030.45	234570.19	37495.91	
Facility Primary Type: Long-Term Care									
Miramichi Lodge	725 Pembroke Str	14306	24	NG	279225.00 m3	83310.75	2967541.03	527910.32	36.9 207.43 (ekWh/m2)
				Elect.	2002632.00 kWh	193089.8	2002632	192332.78	13.44 139.99 (ekWh/m2)
Bonnechere Manc	470 Albert Street	12820	24	NG	395538.00 m3	132588.02	4203689.66	747814.82	58.33 327.90 (ekWh/m2)
				Elect.	2129746.00 kWh	225236.32	2129746	204540.81	15.95 166.13 (ekWh/m2)
Facility Type Total						634224.89	11303608.69	1672598.73	
Facility Primary Type: Social Housing									
RCHC	26 Spruce Street	12077	24						
Facility Type Total						0	0	0	
Facility Primary Type: Public Works									
Cobden Patrol Gar	PO Box 232 Main !	557	5.72	NG	8645.00 m3	3587.97	91877.13	16344.47	29.34 164.95 (ekWh/m2)
				Elect.	23107.00 kWh	3144.55	23107	2219.2	3.98 41.48 (ekWh/m2)
Pembroke Patrol	(556 Whitewater R	866	5.72	Propane	27447.00 L	15525.84	192967.64	42295.39	48.84 222.83 (ekWh/m2)
				Elect.	57186.00 kWh	7496.64	57186	5492.14	6.34 66.03 (ekWh/m2)

Goshen Patrol Gar 1460 Lochwinnocf	660	5.72 NG Elect.	7886.00 m3 40163.00 kWh	3330.94 5171.98	83810.65 40163	14909.48 3857.25	22.59 126.99 (ekWh/m2) 5.84 60.85 (ekWh/m2)
Calabogie Patrol C 758 Mill Street	418	5.72 Propane	14403.00 L	8570.62	101261.08	22194.79	53.1 242.25 (ekWh/m2)
Palmer Rapids Pat PO Box Palmer Ro	379	5.72 Propane Elect.	15215.00 L 60954.00 kWh	9050.77 7995.12	106969.89 60954	23446.07 5854.02	61.86 282.24 (ekWh/m2) 15.45 160.83 (ekWh/m2)
Facility Type Total				63874.43	758296.4	136612.82	
Grand Total				897121.52	14690181.96	2161863.15	