



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) 2011 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								

Appendix A

County of Renfrew

Energy Consumption and GHG Emissions

From: 2011-01-01 To: 2011-12-31

Facility Name	Address	Total Area (m2)	Average Hours/Day Fuel Types	Consumption	Cost (\$)	Energy (ekWh/yr)	GHG Emissions (kG GHG Intensity)	Energy Intensity (kg Energy Intensity)
Facility Primary Type: Office County Admin Buil 9	International Dri	4601	5.72 NG Elect.	56745.00 m3 844825.00 kWh	19028.41 91430.57	603073.21 844825	107283.63 811369.93	23.32 131.07 (ekWh/m2) 176.35 183.62 (ekWh/m2)
Renfrew County Pl 450	O'Brien Rd	3658	5.72 NG Elect.	45662.00 m3 547063.00 kWh	15634.47 53049.87	485285.55 547063	86329.81 525399.31	23.6 132.66 (ekWh/m2) 143.63 149.55 (ekWh/m2)
80 McGonigal	80 McGonigal St.	492	5.72		179143.32	2480246.76	1530382.67	
Facility Type Total								
Facility Primary Type: Emergency Medical Services Arnprior Paramedi 91	Meehan Steet	268	24 NG Elect.	7321.00 m3 26988.00 kWh	3353.61 2995.53	77805.96 26988	13841.28 25919.28	51.65 290.32 (ekWh/m2) 96.71 100.70 (ekWh/m2)
Petawawa Parame 170	Civic Centre Ri	301	24 NG Elect.	4814.00 m3 30916.00 kWh	2439.95 4257.54	51162.12 30916	9101.48 29691.73	30.24 169.97 (ekWh/m2) 98.64 102.71 (ekWh/m2)
Barry's Bay Param 18	Billings Street	301	24 Propane Elect.	8966.00 L 20308.00 kWh	5072.74 2861.59	63035.96 20308	13816.46 19503.8	45.9 209.42 (ekWh/m2) 64.8 67.47 (ekWh/m2)
Deep River Param 37	Banting Drive	301	24		20980.96	270216.03	111874.03	
Facility Type Total								
Facility Primary Type: Long-Term Care Miramichi Lodge 725	Pembroke Strr	14306	24 NG Elect.	287556.00 m3 1956237.00 kWh	91541.15 179573	3056081.04 1956237	543661.14 1878770.01	38 213.62 (ekWh/m2) 131.33 136.74 (ekWh/m2)
Bonnechere Mano 470	Albert Street	12820	24 NG Elect.	369806.00 m3 2133678.00 kWh	132608.98 221607.05	3930215.7 2133678	699165.21 2049184.35	54.54 306.57 (ekWh/m2) 159.84 166.43 (ekWh/m2)
Facility Type Total					625330.18	11076211.74	5170780.71	
Facility Primary Type: Social Housing RCHC			24		0	0	0	
Facility Type Total								
Facility Primary Type: Public Works Cobden Patrol Gar PO Box 232	Main S	557	5.72 NG Elect.	11641.00 m3 16342.00 kWh	4683 2650	123717.95 16342	22008.79 15694.86	39.51 222.11 (ekWh/m2) 28.18 29.34 (ekWh/m2)

Pembroke Patrol C 556 Whitewater Ri	866	5.72 Propane Elect.	25864.00 L 57709.00 kWh	18978 8175	181838.27 57709	39856.01 55423.72	46.02 209.97 (ekWh/m2) 64 66.64 (ekWh/m2)
Goshen Patrol Gar 1460 Lochwinnoch	660	5.72 NG Propane Elect.	23907.00 m3 13739.00 L 33534.00 kWh	9124 10082 4846	254078.26 96592.8 33534	45199.22 21171.58 32206.05	68.48 384.97 (ekWh/m2) 32.08 146.35 (ekWh/m2) 48.8 50.81 (ekWh/m2)
Calabogie Patrol G 758 Mill Street	418	5.72 Propane Elect.	16561.00 L 61063.00 kWh	12218 8700	116433.02 61063	25520.24 58644.91	61.05 278.55 (ekWh/m2) 140.3 146.08 (ekWh/m2)
Palmer Rapids Pati PO Box Palmer Ro:	379	5.72		79456	941308.31	315725.37	
Facility Type Total				904910.46	14767982.84	7128762.79	
Grand Total							