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ENERGY MANAGEMENT PLAN	ENERGY MANAGEMENT POLICY: ERG-1
COUNCIL APPROVAL:	REVIEW/REVISE: ANNUALLY
REGULATION: N/A	FORMS: N/A

Our Commitment

Effective energy management begins with the specific, visible expression of commitment by the senior authorities in the Municipality to making the reduction of energy consumption an organizational priority. At a minimum, this commitment includes a resolution by Municipal Council articulating the staff mandate to plan and implement measures for energy efficiency improvement. Furthermore, successful energy management depends on the integration of energy efficient practices into the "business as usual" conduct of the organization, is based on a regular assessment of energy performance, and requires the implementation of procedures and measures to reduce energy waste and increase efficiency. Regardless of the size of the municipality, the common element of successful energy management is the allocation of staff and resources to continually improve energy performance.

- *Declaration of commitment - Council Resolution:* We will allocate the necessary resources to develop and implement a strategic energy management plan that will reduce our energy consumption and its related environmental impact.
- *Vision:* We exercise stewardship in our use of finite energy resources in order to demonstrate leadership, optimize our delivery of services, and enhance the overall quality of life in our community.
- *Policy:* We will incorporate energy efficiency into all areas of our activity including our organizational and human resources management procedures, procurement practices, financial management and investment decisions, and facility operations and maintenance.
- *Goals (long term):* 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.
- *Overall target:* We will reduce our consumption of fuels and electricity in all municipal operations by an average of 2% per year between now and 2020.
- *Objectives (short to medium term):*
 1. to implement energy audits on all municipal facilities during the next five years;
 2. to reduce total energy consumption in municipal facilities, normalized to weather conditions, by 5% over the next five years;
 3. to reduce energy consumption in the 3 municipal arenas by 3% during fiscal year 2011.



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Our Understanding of the Current Situation

The Energy Management Program is built upon information that describes the current status of the organization on two dimensions: its business practices, and its energy use practices. The strategic energy management plan includes these information outputs.

1. Organizational

- *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.
- *Our Municipal Energy Needs:* We need reliable, low-cost, sustainable energy sources delivering energy to the most efficient facilities and energy-consuming technology feasible.
- *Municipal Energy Situation (Strengths, Weaknesses, Opportunities and Threats):* Our assessment of organizational capacity for energy management with respect to energy policy; organizational structure; employee awareness, skills and knowledge; energy information management; communications; and investment practices indicates the following high, medium and low priorities for development (list):
- *How We Manage Energy Today:* The management of energy consumption and the energy performance of our facilities and equipment are the responsibilities of Finance (cost management), Works Department (maintenance), and department managers (operations).

Our Plan

The Action Planning phase of activity flows logically out of the Data Collection and Analysis phase in that:

- *Knowledge of the situation leads to goals and objectives*
- *Goals and objectives need broad strategies, and*
- *Actions need to be designed to carry out the strategies.*

Action planning means specifying the measures and activities that will be implemented, the personnel who will be accountable for the various tasks, the resources required, the time line or schedule for implementation, and the means of evaluation.

1. Strategic

- *Long-term strategic issues:* Strategic level issues addressed in this plan are energy policy development, organizing for energy management, developing required skills



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and knowledge, managing energy information, communicating with our stakeholders, and investing in energy management measures.

- *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, its preventative maintenance plans, the environmental management plan, and the overall asset management plan.

2. Leadership

- *Energy leader:* We will clearly designate leadership and overall responsibility for corporate energy management.
- *Energy team:* We will appoint employees to act as departmental energy efficiency team members.
- *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.

3. Structure

- *Integration of energy management with other management processes:* We will coordinate energy management planning and information management into organizational strategic planning and budget development.
- *Departmental responsibilities:* We will identify energy account centres (EAC) aligned with the organization structure, and will incorporate energy budget accountability into departmental responsibilities.
- *Accountability for energy:* We will assign overall accountability for corporate energy performance to the Energy Management Team with the building division as the lead resource for the Energy Management Team.

4. Resources

- *Staffing requirements and duties:* We will incorporate energy efficiency into standard operating procedures and the knowledge requirements for operational jobs.
- *External consultants and energy suppliers:* We will establish criteria based on our energy goals and objectives for the selection of external consultants and energy suppliers.

5. Development of Energy Projects



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- *Internal assessments:* We will develop a methodology for the internal assessment of the energy performance of municipal facilities and their energy loads and a process for identifying and cataloguing energy efficiency opportunities.
- *Staff suggestions:* We will implement a dynamic process for the submission and processing of staff suggestions for energy efficiency improvements.
- *Energy audits:* We will establish the criteria for energy audits of municipal facility and carry out such audits on our facilities on a three- year cycle.
- *Feasibility studies:* We will define the requirements of feasibility studies to be conducted on selected measures proposed in energy audits as a basis for making implementation decisions.
- *Opportunity selection criteria (process):* We will define the financial criteria (in terms of simple payback period and internal rate of return) to be used for the screening of and implementation of proposed measures respectively.

6. Capacity Building

- *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.
- *Energy Awareness Training:* We will develop and deliver training focused on the energy implications of employees' job functions and the day- to- day opportunities for conserving energy found in the workplace and at home.
- *Energy Skills Training:* We will develop and deliver skills training for operators, maintainers and other employees that have "hands- on" involvement with energy consuming systems in order to enhance their capacity to achieve energy efficiency improvements.
- *Business Procedures:* We will carry out a comprehensive review of all business processes and modify them as necessary in order to incorporate energy efficiency considerations.

7. Procurement

- *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 of acquired equipment:* Our purchasing procedures will be modified as required to incorporate energy efficiency into the criteria for selection of materials and equipment.



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

8. Method of implementation of energy projects

- *Internal implementation:* We will develop criteria for determining whether internal resources can be utilized for the implementation of energy projects.
- *External providers:* We will develop criteria and a strategy for securing external services for the implementation of energy projects.
- *Creative approaches:* We will investigate and document options for the implementation of energy projects that utilize public- private partnerships, creative financing arrangements including energy performance contracting, and other creative approaches.

9. Investment in Energy Projects

- *Investment criteria:* We will develop and/or clarify as necessary the financial indicators that are applied to investment analysis and prioritization of proposed energy projects, taking due consideration of the priority given to energy efficiency projects *vis à vis* other investment needs.
- *Financial analysis conducted:* We will develop a template for the cost- benefit analysis of proposed energy management measures and for tracking the financial impact of implemented energy projects.
- *Budgetary resources for energy projects:* We will integrate energy projects into our capital planning and budget development procedures.
- *Capital:* Criteria for the allocation of capital resources to energy projects will be incorporated into our annual capital planning procedures.
- *Expense:* Our financial system will be modified as required to incorporate expense line items that pertain to the analysis and implementation of energy projects.
- *Other sources of funds for energy projects:* The Energy Manager and Energy Team will be mandated to investigate, document and communicate funding sources for energy projects, including government and utility grants and incentives.

10. Monitoring



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- *Ongoing monitoring of consumption:* We will implement an energy monitoring and targeting (M&T) system as an integral component of our management information system.
- *Measurement and verification of energy projects:* We will adopt standard methods for savings verification and incorporate a measurement and verification (M&V) plan into all energy projects.

11. Reporting

- *Reporting for the GEA:* We will monitor and respond to reporting requirements for the Green Energy Act.
- *Reports to stakeholders (community):* Our external communication strategy will include quantitative reports regarding energy performance of municipal facilities and the impact of implemented energy management measures.
- *Reports to Council:* We will generate quarterly summary energy performance reports from our M&T system to apprise Council of the progress made towards our corporate energy goals and objectives.
- *Reports to accountable staff:* Staff that are accountable for energy performance will be provided with timely and regular reports from the M&T system at a level of detail that reflects their spheres of influence.
- *Reports to energy users:* Facility managers, department managers, operations and maintenance lead hands, and other key energy users will be provided with timely and regular energy consumption reports generated from the M&T system.

Execution

*This is the point at which the commitment of the Municipality, all of the assessment activity, and the planning work pay off. The Energy Action Plan provides a priority list of **activities**—the initiatives that address the role of people and the impact of business practices on the energy performance of the organization—and **projects**—the measures that include technology and/or operational changes having a direct energy efficiency benefit—for implementation. Execution is a "project management" function, which matches implementation needs with the requisite human and financial resources.*

1. Energy Activities

- *Municipality 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.



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- *Facility (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.

Priorities:

- 1) Reduce fuel consumption in the 300 hundred series vehicles through the use of G.P.S. system and apply the information collected to all vehicles used by the Municipality to reduce total fuel consumption.
- 2) Review the energy audits on the Municipal buildings and budget funds to complete the recommendations.
- 3) Reduce paper consumption by 10% using electronic devices such as internet and the intranet.
- 4) To begin an education program for all Municipal staff on methods to reduce energy.
- 5) To convert existing street lights to the more energy efficient L.E.D. fixtures.
- 6) To implement a public awareness program to encourage the general public to reduce the use of motorized vehicles within the Municipality. During the planning of development and Municipal services provide for walkways, bicycle pathways and trails.