



# Municipality of Tweed

## Corporate Energy Management Plan

### 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 organization 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: To reduce consumption of fuels and electricity in all municipal operations.
- 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 condition, over the next five years.



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### Understanding of the Current Situation

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

- 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 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).

### Resources Planning

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.

- Long-term strategic issues: Strategic level issues addressed in this plan are energy policy development, organizing for energy management, developing required skills and knowledge, managing energy information, communicating with our stakeholders, and investing in energy management measures.



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- 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, and the overall asset management plan.
- Energy leader: We will clearly designate leadership and overall responsibility for corporate energy management.
- Internal Resources: An Energy Management Team will be managers from departments throughout the organization. This team will meet to discuss the plan and any outstanding energy issues within the organization. The Energy Management Team will also be a medium for communicating the energy conservation message to staff. Proposed energy saving plans will be brought forward for discussion at a regular budget meeting.
- External Resources: Suppliers will be utilized based on the energy goals and objectives for the selection of external consultants and energy suppliers.

### **Projects Execution**

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. Project management will 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 resource.

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

### **Review**

As part of any energy management strategy, continuous monitoring, verification, and reporting is an essential tool to track consumption and dollar savings and/or avoidance as the result of implemented initiatives. The energy conservation initiative will identify a number of priority objectives that will serve as the key planning and guiding document for the Municipality of Tweed during the next few years. The Municipality will review and evaluate the energy plan, revise and update it as necessary on an annual basis.





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### Evaluation Progress

- **Tweed Arena** – the exterior of the Arena was insulated with R10 factor; through the Save on Energy Retrofit Program the Municipality replaced 40 lights over the ice surface with energy savings lights resulting in an energy saving of 28%; hot water tanks were replaced with efficient tankless water heaters.
- **Municipal Administration Building** – replaced windows with energy star rating vinyl clad windows; through the Hydro One's Electricity Retrofit Incentive Program the Municipality replaced the existing tube ballasts lights to high efficiency lights resulting in an energy saving of 44%; replaced two roof top cooling units with energy efficient units with economizers; replaced two oil heated boilers with high efficient gas boilers; windows on west side of building will be tinted in 2014 to deflect heat in summer.
- **Actinolite Hall** – replaced windows with energy star rating vinyl clad windows.
- **Municipal Buildings** - through the Power Savings Blitz program the Municipality replaced existing lights in 13 buildings with energy-efficient lighting.
- **Streetlights** – the Municipality will replace all streetlights with LED lights with an energy savings of 66%.
- **Fire Hall** – replaced six overhead doors with insulated doors.
- **Tweed Public Library** – the new library is an energy efficient building.
- **Community** – the Municipality offered an incentive program for low flush toilets and high efficient washing machines.



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### Programs

- Send key people to energy savings training.
- To begin an education program for all Municipal staff on methods to reduce energy.

### Projects

- Identify unnecessary plug loads.
- Increase the utilization of technology (control system for ice plant).
- Reduce expenses through improved building operations.
- Investigate options for equipment efficiencies.
- Fine tune heating and cooling system.
- Improvements to facilities – caulking, weather-stripping, and insulating to improve heating and cooling loss.
- Review and upgrade or remove baseboard heaters.

### Processes

- Make the most of day lighting and shading – open window covers to fully let the sunshine in cool seasons to reduce reliance on heating system and close window covers in summer season to reduce reliance on air conditioning.
- Soft drink machine controls: timers and unplug off season.
- Make use of free cooling in summer by bringing in 100% outdoor air at night.
- Turn off printers at night and on weekends.
- Unplug coffee maker at night.
- Observe the energy activity in other municipalities.
- Provide autonomy to workers and managers to develop new solutions to energy challengers.