



TOWN OF BLIND RIVER 2014 TO 2019

Corporate Energy Management Plan



Approved by the Town Council on July 07, 2014

Corporation of the Town of Blind River

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Corporate Energy Management Plan

TOWN OF BLIND RIVER 2014 TO 2019

Commitment

Declaration of Commitment: Council Resolution: The Town of Blind River will allocate the necessary resources to develop and implement an Energy Conservation and Demand Management Plan as required under Regulation 397/11 of the Green Energy Act. Council supports energy planning because it will help avoid cost increases, improve service delivery, and support local industry while protecting human health and the environment. The Energy Conservation and Demand Management Plan will reduce our energy consumption and its related environmental impact as outlined in the overall target. Staff and Council will ensure that the objectives presented in this plan are achieved and that progress towards those objectives is monitored on an ongoing basis. Staff and Council will update the plan as required under Regulation 397/11 of the Green Energy Act or any subsequent legislation.

Vision: Council will strive to continually reduce the total energy consumption and associated greenhouse gases (GHGs) through wise and efficient use of energy and resources, while still maintaining an efficient and effective level of service for our citizens and the general public. This will involve a collaborative effort to increase the education, awareness, and understanding of energy management within the municipality. Total energy consumption includes electricity and natural gas. 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 municipality. While commitment from Council and Senior Management is crucial, everyone has a role in the wise use of energy and to showcase appropriate leadership within corporate facilities and operation.

Policy: The Town of Blind River will incorporate energy efficiency into all areas of activity including organizational and human resources management procedures, procurement practices, financial management and investment decisions, and facility operations and maintenance. As a major component of the operating costs of municipal facilities and equipment, energy costs will be factored into the lifecycle cost analysis and asset management analysis and policies of the municipality. All departments will have clear links to some or all of the goals and objectives of the Energy Conservation and Demand Management Plan.

Goals: The Town of Blind River Energy Conservation and Demand Management Plan was completed to help achieve the following goals:

1. Maximize fiscal resources and avoid cost increases through direct and in direct energy savings
2. Reduce the environmental impact of the municipality's operations
3. Increase the comfort and safety of staff and patrons of the municipality's facilities
4. To create a culture of conservation within the municipality.
5. To improve the reliability of the municipality's equipment and reduce maintenance costs.



Overall Target: The Town of Blind River will reduce the overall municipal energy consumption (from all facilities and streetlights) by 5% from 2014 (based on baseline data) to 2019.

Objectives: In order to meet the strategic goals of the Energy Conservation and Demand Management Plan, there are a number of goals and objectives that align with its development and implementation:

1. Ensure energy efficiency consistency across municipal facilities
2. Monitor and report on energy consumption in semi-annual intervals. Staff will monitor and verify reports to enable reinvestment in energy projects and report on energy consumption two times per year.
3. Better analyze energy costs and look for savings opportunities. This will include looking at energy commodity procurement options and taking advantage of all available resources and funding for energy projects.
4. Raise staff and Council awareness around energy efficiency. This will include communicating successes to both internal and external stakeholders.
5. Strengthen partnerships with external stakeholders such as electric and gas utilities.
6. Identify and seize renewable energy generation opportunities.

Organizational Understanding

The Municipal Energy Needs: The Town of Blind River requires reliable, low-cost, sustainable energy sources delivering energy to the most efficient facilities and energy-consuming technology feasible. The Town applies a triple bottom line approach to energy management. Triple bottom line (TBL) accounting expands the traditional reporting framework to take into account social and environmental performance in addition to financial performance. A TBL municipality conceives a reciprocal social structure in which the well-being of corporate, labour and other stakeholder interests are interdependent. A triple bottom line municipality does not produce harmful or destructive products such as weapons, toxic chemicals or batteries containing dangerous heavy metals, for example. A triple bottom line municipality derives economic value after deducting the cost of all inputs, including the cost of the capital tied up. The triple bottom line approach prioritizes a lifecycle cost analysis of products and services procured by the municipality wherever possible.

Stakeholder Needs: Internal stakeholders (Council, Clerk-Administrator, 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.

Municipal Energy Situation: The 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 issues:

- Energy use and costs continue to increase and are forecast to increase further.
- Energy is not visible to municipal decision makers such as Council, senior management, front-line staff, and members of the public. This leads to a lack of understanding of the costs of energy and the opportunities for energy efficiency.
- Occasional efforts are made to raise general staff awareness about energy.
- Additional municipal responsibilities and services have had an important impact on existing facilities and several of these facilities can no longer operate under the existing physical conditions.
- The requirement for this Energy Conservation and Demand Management Plan provides an opportunity to build upon current initiatives such as the Asset Management Plan, the

How To Manage Energy Today: The management of our energy is a combination of energy data management, energy supply management, and energy use management.

Energy Data Management: The municipal energy data is managed through the Treasurer. The data is received via supplier invoices, then tracked and/or monitored using the LAS Energy Planning Tool: Invoices are entered into the EPT, consumption/trends are analyzed, and reports are generated.

Energy Supply Management: The municipal energy is supplied via a number of providers as outlined below: Electricity is supplied by Hydro One on an as needed basis and is priced at the standard rates offered by the provider. Natural Gas is purchased from Union Gas as part of the LAS Natural Gas Procurement Program.

Municipal staff will investigate a hedging strategy for purchasing electricity through Local Authority Services (LAS). Energy Use Management: Day to day management of energy has historically happened in an ad-hoc manner. To aid in our efforts to track and reduce energy use the Municipality of Blind River plans to utilize the LAS Energy Planning Tool (EPT) in an ongoing manner and to generate and share reports as required.

Summary of Current Energy Consumption, Cost and GHGs: The current energy usage by building is detailed in Appendix A. The energy usage will be updated monthly in the Energy Planning Tool (EPT) and reported annually to the Ministry of Energy.

Summary of Current Technical Practices: The assessment of operations and maintenance practices, facility and equipment condition, and energy performance indicators establishes the following priorities:

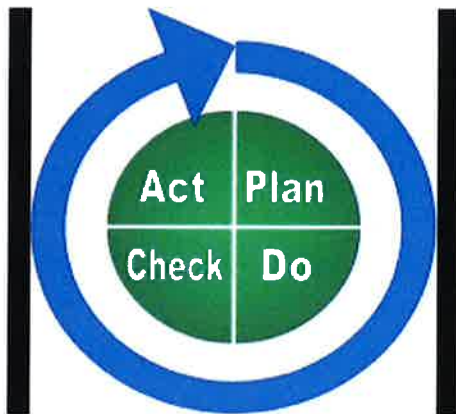
- Development of standard operating procedures incorporating energy efficiency optimization.
- Enhancement of preventative maintenance procedures.
- The municipality will apply for funding under eligible grants to make the following upgrades to the Travel Centre, the Marine Park, the Timber Village Museum, the Seniors Centre, the Public Library, the Courthouse and the Community Centre for the removal of T-12 fixtures.



Renewable Energy Utilized or Planned: Renewable energy is energy which comes from natural sources such as sunlight, wind, and geothermal heat. Utilizing renewable energy can generate a revenue source through the Provincial Feed-in Tariff (FIT) Program or significantly reduce the energy requirements of a building along with the associated greenhouse gases. The Town of Blind River aspires to continue to show leadership in the promotion and development of renewable energy systems that are compatible with our asset management and land use planning objectives. As a result, the municipality will ensure that any new facilities are constructed to a "solar ready" standard and will investigate the potential to develop solar photovoltaic systems on the rooftops of all new corporate facilities with sound, south-facing roofs. This process will continue to be managed by North Shore Power Group.

Strategic Planning

Links with other municipal plans: The Town of Blind River will develop and implement energy policies, organize for energy management, develop the required skills and knowledge, manage energy information, communicate with stakeholders, and invest in energy management measures. As an integral component of the management structure, the Energy Conservation and Demand Management Plan is to be coordinated with the municipality's budget planning, strategic plan, procurement policy, preventative maintenance plans, environmental management plan, asset management plan, and the policy development process.



Structure Planning

Staffing requirements and duties: The Town of Blind River will incorporate energy budget accountability into corporate responsibilities. We will incorporate energy efficiency into standard operating procedures and the knowledge requirement for operational jobs.

Consideration of energy efficiency for all projects: The Town of Blind River will incorporate life cycle cost analysis into the design procedures for all capital projects. Typically equipment to be considered for this process includes:

- HVAC equipment (e.g. boilers, chillers, pumps, motors etc.)
- Lighting and controls
- Building envelope (e.g. roofs, insulation, windows and doors etc.)
- Water use (e.g. pools, toilets, water reclaim etc.)
- BAS (building automation system) controls,
- Process improvements
- Back-up generators
- Any other energy consuming device

These types of projects generally follow 5 steps:

1. Project Identification and Feasibility
2. Energy Audits, Feasibility Analysis or through detailed Condition Assessments.
3. Planning and Budgeting - Project Financing, Incentives, Business Case and Approvals
4. Implementation: Tender, Project Execution, Project Management, Commissioning
5. Monitoring and Verification: measure and Verify Results, Reporting Achievements. The intent is to make the analysis part of the municipality's normal course of business for all facility and operational retrofits, including capital renewal and life cycle replacements projects. Success means incorporating energy efficient options at the initial stages of a project design. This ensures that options for improving energy efficiency are considered, evaluated and quantified in terms of life cycle costing analysis, including cost, maintenance and emission reductions.

Resources Planning

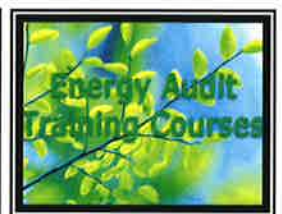
Energy Leader: Senior Administration has been designated as the energy leaders with overall responsibility for corporate energy management.

Energy Team: Senior Administration will identify staff members and personnel from the critical service providers who carry significant responsibility for energy performance or who can make essential input to energy management processes.

Internal Resources: The Town of Blind River will develop criteria for determining whether internal resources can be utilized for the implementation of energy projects.

External Consultants and Suppliers: Senior Administration will establish criteria in the Procurement Policy based on energy goals and objectives for the selection of external consultants and energy suppliers. These criteria will employ triple bottom line principles and ultimately include a lifecycle cost analysis of desired products and services whenever possible.

Energy Training: The Town of Blind River will develop and deliver energy training for relevant staff and Council members. 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 employees' job functions will be utilized whenever possible. Energy management training will be incorporated into employee orientation and future training opportunities offered through Human Resources. All such energy management training opportunities are integrated into ongoing staff training and designed to allow for the internal capacity building necessary to ensure that staff are making informed decision and reducing the need for costly external assistance. The Town of Blind River will utilize both internal and external resources to provide this training as much as resources allow.



Procurement Planning

Energy Purchasing: In addition to the conservation of energy, the procurement of energy is equally as important. Proper energy procurement includes: rate optimization, utility account management, supplier choice and evaluation, supply reliability and quality, demand/supply optimization and risk management. The Town of Blind River will develop a procedure for the negotiation of energy purchase contracts that appropriately addresses cost considerations, available energy services, energy quality and reliability, and other performance factors. A primary objective of this policy will be to provide price stability by fixing future prices. A key deliverable will be to investigate and report back to senior management and Council on energy commodity purchasing programs available to the municipality. Semi-Annual meetings will be held to review any cost and consumption variances as well as to project the upcoming annual cost per commodity for budgeting and consumption load profiles. Monthly billing analysis also provides an opportunity to identify and recover any billing errors, or usage that requires further investigation.

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

Implementation Planning

Building Standards: Town of Blind River staff 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. LEED (Leadership in Energy and Environmental Design) is a green building certification tool administered by CGBC (Canada Green Building Council), which provides a framework for constructing green/ energy efficient buildings. The LEED rating system addresses the performance of commercial and institutional buildings. Many municipalities have adopted standards such as minimum LEED Silver rating for all new municipally owned new construction projects. Considering LEED for new construction and major renovations makes good business sense, in that a high performance green building vs. conventional inefficient buildings can reduce energy consumption by 25% to 75%, water use reduction by 20% to 50% and reduced environmental greenhouse gas (GHG) emissions by as much as 60%. The Town of Blind River will investigate adopting such a standard for new buildings and will incorporate any such standard into our revised Energy Conservation and Demand Management Plan.

Communication Programs: Town of Blind River staff 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. Activities could include circulating reminder stickers to turn lights off, putting up energy conservation displays, promoting home energy audits, hosting lunch and learns, and conducting Natural Step training.

Investment Planning

Internal Funding Sources: Senior Administration 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 versus other investment needs (life cycle versus simple payback). Energy and operating costs savings, physical asset renewal, improved employee comfort and service delivery, and enhanced environmental protection are all quantifiable benefits of energy and demand management and will be factored in accordingly.

Creative Approaches: Town of Blind River staff will investigate, document, and communicate funding sources for energy projects, including government and utility grants and incentives.

Implementation Planning

Business Procedures: Municipal staff will carry out a comprehensive review of all business processes and modify them as necessary in order to incorporate energy efficiency considerations. The Town of Blind River will include depreciation of all assets as part of its Asset Management and Capital Planning and will undertake a Lifecycle Cost Analysis of potential new products and services to ensure operating costs are factored into our plans and analyses. Municipal governments apply Lifecycle Cost Analysis as a basis for policy and regulatory development. Current applications include:

1. Helping to prioritize programs based on life cycle information,
2. Making policies consistent among material suppliers, service contractors, and internal departments,
3. Reducing the impact that government operations have on the environment,
4. Promoting pricing products and services to accurately reflect "true" costs.

Projects Execution

Municipal Level: The administration and implementation of this Energy Conservation and Demand Management Plan will be the responsibility of the Treasurer. Since we all use energy in our daily activities, it will also be the responsibility of all municipal staff to be aware of their energy use and work towards a culture of conservation. Through staff training and web base energy management tools, staff will be able to see the results of their efforts, and benchmark between corporate facilities and with industry standards.

Asset Level: In order to sustain a corporate culture of conservation, staff must be engaged in an effective awareness and education program. Although facilities staff has the lead responsibility in ensuring facilities operate efficiently, all municipal staff should be familiar with and utilize energy efficient measures where possible. The first step in implementing an energy management program is the completion of energy audits for corporate facilities. Audits involve a technical review of a facility and its operations, the development and analysis of a baseline energy profile for the facility and identification of energy management opportunities and savings. Audits have been conducted on municipal facilities as part of this initial planning exercise and should continue to occur on a regular schedule in the future for new and existing facilities.

Another important component of an energy management program is the re-commissioning. Over the life cycle of a facility, the mechanical building automation and distribution systems are adjusted from day-to-day to suit user room temperature requirements. Moreover, mechanical distribution or building controls instrumentation is sometime over-looked when renovations take place. Re-commissioning involves examining the original mechanical design and operating specification against any building renovations and recalibrates the settings to suit today's energy efficient standard practices. It also ensures that mechanical operating practices are current and appropriate to maximize building system efficiencies. The use of renewable energy measures can also help reduce overall corporate greenhouse gas emissions by lessening our demand for fossil fuel generated energy (oil, gas or coal). The investment for these types of measures can be significantly greater than conservation initiatives and therefore, should be considered on a case-by-case basis through a cost and environmental benefits analysis. However, it is acknowledged that the use of technologies such as wind, solar and geothermal can show community leadership and help raise awareness of the benefits of utilizing renewable energy.

Review

Energy Plan 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. Town of Blind River staff will develop an annual progress report with energy consumption data and initiatives undertaken within the calendar year and will report to Council on progress twice a year. As part the Energy Plan, the implemented processes improvements, program implementation and projects will continue to be documented and reviewed annually to update consumption savings. By regularly monitoring and reporting consumption and dollar savings and/or avoidance to Departments, the outcomes of their participation in energy management initiatives can be demonstrated, and feedback can be obtained for any new ideas. This monitoring and reporting will also align with the requirements of Regulation 397/11 under the Green Energy Act and/or any subsequent legislation related to energy management.

Discussion of Progress: Semi-Annual energy performance summary reports will be generated to apprise Council of the progress made towards corporate energy goals and objectives. The general public will be apprised of energy performance of municipal facilities and the impact of implemented energy management measures where appropriate.

Evaluation Progress

Energy Consumption: Senior Administration will review and evaluate the energy plan, revising and updating it as necessary, annually as based on the Energy Consumption Reports that are submitted to the Ministry of Energy on an annual basis as required under Regulation 397/11.

Green House Gas Emission: Governments at all levels are moving to address emissions of greenhouse gases (GHGs), in light of scientific evidence on how human activities are affecting the world's climate. For more information on the science, see <http://www.ipcc.ch/>. The combustion of fossil fuels in buildings is a major source of GHG emissions that fall under local government influence. Municipalities can lower emissions by improving energy efficiency of buildings and using more renewable energy. The Town of Blind River is committed to both objectives through the development and implementation of this Energy Conservation and Demand Management Plan (CDM). We will continue to track and report on GHGs as part of our regular reporting on energy consumption and will evaluate progress in this area against our overall reduction target.

Reducing Greenhouse Gas Emissions

Did you know greenhouse gases are released when we use energy derived from burning fossil fuels such as coal, oil, natural gas, gasoline, and diesel?



Programs, Process, and Projects

Programs

Description	Facility	Contact	Date	Status
Add energy awareness to management meetings	All			
Details	Energy reports to be distributed to managers on a semi-Annual basis.			
New Employee Orientation	All			
Details	<p>As part of Orientation Program: provide new staff with energy management training. Appropriate training vehicles include but are not limited to the following:</p> <ul style="list-style-type: none"> -- Natural Resources Canada Dollars to \$ense Workshops -- RetScreen Training -- LAS workshops and webinars -- ORFA workshops and training courses -- OCWA run education opportunities 			
Visual Displays	All			
Details	<p>Make use of visual displays to demonstrate to staff the implications of current behaviors. Displays can include:</p> <ul style="list-style-type: none"> -- simple poster and/or screen saver that reminds staff of the municipal energy conservation goal -- reminders around light switches and thermostats to turn off appliances when not in use. Turning off unnecessary lights not only reduces costs to the municipality but it also reduces the light that may be cast up into the sky, benefiting migrating birds, and preserving our view of the stars. -- Semi-Annual reports posted in staff lunchroom(s) -- graphic representation of progress made towards energy conservation goal 			
Energy Leader	All			

Details	<p>The Deputy-Clerk has been designated as the Energy Champion within the town of Blind River. The Energy champion is responsible for:</p> <ul style="list-style-type: none"> -- instilling a culture of energy conservation within their respective workplaces with each occupant and piece of equipment -- developing conservation strategies with facility staff for implementation within each given facility -- share best practices, lessons learned, and innovative energy practices with other team members -- monitor progress towards energy conservation goal and ensure that there is no backsliding 			
Employee Engagement				
Details	<p>Although the adoption of energy efficient technology usually forms the basis for energy conservation projects, there is a behavioral aspect to the energy conservation equation that is often overlooked. The objective of this program is to empower staff and provide them with the education required to adopt behavioral practices that will result in the optimization of facility energy usage. This engagement program will include, but not be limited to, the following items:</p> <ul style="list-style-type: none"> -- Identification of improvements. Staff will be encouraged to submit ideas for process improvements or projects that will reduce the corporate and personal energy consumption. A best practice in this area would be to establish a separate email or virtual community for the posting of these suggestions and that senior management and/or the energy champion review these messages on a pre-determined and regular basis. -- Have different staff walk through facilities on an annual basis. Enabling staff from different departments (or neighboring municipalities) to walk through another's facility once or twice a year will highlight some wasteful practices that the regular inhabitants have become unaware of. Organizational behavior research states that staff have become 'blind' to existing practices once they are in a given organization or facility for more than six months. 			

Natural Step Training				
Details	<p>The Natural Step is a highly respected provider of learning programs based both on a big- picture, science-based understanding of sustainability and some great insights into how adults learn best. The Natural Step Canada has helped more than 25,000 people realize their potential as sustainability practitioners and change agents. The Town of Blind River should consider offering The Natural Step Canada™s Level 1 Sustainability Course: Foundations in Strategy. This workshop works through a hands-on case study using The Natural Step Framework for Strategic Sustainable Development, providing the knowledge and tools to better understand strategy and take a systemic approach to planning and managing sustainability initiatives. This workshop will equip staff to take a sustainability leadership role to capture value, enable innovation, and drive strategy.</p>			

Processes

Description	Facility	Contact	Start	End	Status	Cost	Save (ekWh/ yr)	Save (\$)	ROI
Life Cycle Costing	All		-						0
Details	<p>Incorporate life-cycle costing into procurement policy and related processes. Life-cycle cost analysis (LCCA) is a method for assessing the total cost of facility and/or equipment ownership. It takes into account all costs of acquiring, owning, and disposing of a building or building system. LCCA is especially useful when project alternatives that fulfill the same performance requirements, but differ with respect to initial costs and operating costs, have to be compared in order to select the one that maximizes net savings. The Municipality of Blind River should update its current procurement by-law to include sections on green procurement. Green procurement shall be viewed in the context of achieving value for money based on the total life-cycle costs. It requires the inclusion of environmental impact considerations into the procurement process, including planning, acquisition, and disposal. All suppliers and vendors will be required to provide the life-cycle analysis of their products and/or provide those details for the municipal procurement team to complete this analysis.</p>								
Appliance Usage			-						
Details	<p>Since there is no equipment required to turn appliances off, there are no environmental impacts from product manufacture, shipping or disposal. Appliances are often left on in municipal offices because staff feel their individual impact is insignificant, however, when totaled across the municipality across a given year the impact can run in the hundreds of dollars for a municipality the size of Blind River.</p> <p>Turn off all electronic devices such as coffee makers, printers, calculators, phone chargers, etc. at night and on weekends. Reduce phantom power wherever possible. Phantom energy sucks extra energy from the grid when you aren't looking and you don't need it. Many gadgets, electronic devices and appliances draw power even when they're switched off or not in use, just by being plugged in, and though it may seem trivial, it can add up over time. Chargers for cell phones, digital cameras, power tools and other gadgets draw energy even when they're not in use. Appliances like televisions, computer monitors, and DVD players can also draw power whenever they're plugged into an outlet.</p> <p>All together, phantom energy can account for about 10 percent of an individual home's electricity use. Staff will identify unnecessary plug loads and eliminate phantom power.</p>								

Details	<p>Reduce the usage of portable electric heaters. While this will need to occur concurrently with recommended energy projects to tackle employee comfort issues, this should be a priority issue given the large number of these appliances in use in every municipal facility. For example, a single 1500 watt heater would cost \$300-500 per year to operate if in use during working hours and more if they are let on in off hours.</p> <p>The Energy Champion will develop a series of messages at regular intervals throughout the month to remind staff to reduce appliance use and eliminate phantom power.</p>								
Energy Commodity			-						
Procurement									
Details	<p>Poor energy procurement decisions can be expensive. Energy prices fluctuate constantly, which can significantly affect your energy bill and performance against budget. By taking a proactive approach to buying energy, you can better control your costs. The Municipality of Blind River will examine options to procure energy commodities more efficiently than the de facto method and investigate offerings such as those managed by LAS.</p> <p>The LAS Electricity Program provides an easy way for Ontario municipalities to ensure predictable electricity commodity costs through a professionally administered program that leverages both aggregated purchasing and spot market exposure. As a licensed electricity retailer in Ontario, LAS is able to remove municipal accounts, including streetlights, from high-cost RPP and time-of-use rates, and enter them into a hedge/spot market billing scenario under the LAS Electricity Program. For both small and large volume municipal electricity accounts, a hedge purchase offers a way to realize significant budget stability, and commodity cost savings in many instances.</p>								
Power Bars			-						
Details	<p>Purchase power bars with integrated timer and shut offs, SaveONenergy coupons available until December 31 offers \$4 discount. Price ranges from \$20-30. Place on desks for awareness and ease of access.</p>								

Projects

Description	Facility	Contact	Start	End	Status	Cost	Save (ekWh/ yr)	Save (\$)	ROI
Use Setbacks on Programmable Thermostat									
Details	Funds will be set aside in 2015 Budget once an inventory and analysis of existing facilities is performed.								
Change all Street Lights to LED									
Details	Contract with Real Term Energy signed and all Municipal Street lights will be changed to LED,s before the end of summer of 2014								
Replace T12 Lighting	Travel Centre								
Details	All existing lighting in viewing area, change rooms and office space(46 Fixtures) consists of T12 fixtures. These will need to be replaced with, at minimum, T8 fluorescent fixtures as T12s will no longer be made available. Replacement Cost: approximately \$38/fixture (includes \$12/fixture incentive) Energy Cost Savings: approximately \$5-\$8/ fixture annually								
Install LED lights in Parking Lots	Community Centre Marina Park								
Details	Real Term Energy is investigating the cost involved in this project								
Replace T12 Lighting	Blind River Marine Park								
Details	All existing lighting in lounge, change rooms and office space(91 Fixtures) consists of T12 fixtures. These will need to be replaced with, at minimum, T8 fluorescent fixtures as T12s will no longer be made available. Replacement Cost: approximately \$38/fixture (includes \$12/ fixture incentive) Energy Cost Savings: approximately \$5-\$8/fixture annually								

Replace T12 Lighting	Timber Village Museum								
	All existing lighting in Art Room, change rooms and office space(35 Fixtures) consists of T12 fixtures. These will need to be replaced with, at minimum, T8 fluorescent fixtures as T12s will no longer be made available. Replacement Cost: approximately \$38/fixture (includes \$12/fixture incentive) Energy Cost Savings: approximately \$5-\$8/fixture annually								
Replace T12 Lighting	Seniors Centre								
Details	All existing lighting in stairway, kitchen and office space (46 Fixtures) consists of T12 fixtures. These will need to be replaced with, at minimum, T8 fluorescent fixtures as T12s will no longer be made available. Replacement Cost: approximately \$38/fixture (includes \$12/fixture incentive) Energy Cost Savings: approximately \$5-\$8/fixture annually								
Replace T12 Lighting	Public Library								
Details	All existing lighting in Book Storage, electrical room and office space (17Fixtures) consists of T12 fixtures. These will need to be replaced with, at minimum, T8 fluorescent fixtures as T12s will no longer be made available. Replacement Cost: approximately \$38/fixture (includes \$12/fixture incentive) Energy Cost Savings: approximately \$5-\$8/fixture annually								
Replace T12 Lighting	Arena								
Details	All existing lighting in Canteen, Washrooms, coat room and office space (14Fixtures) consists of T12 fixtures. These will need to be replaced with, at minimum, T8 fluorescent fixtures as T12s will no longer be made available. Replacement Cost: approximately \$38/fixture (includes \$12/fixture incentive) Energy Cost Savings: approximately \$5-\$8/fixture annually								

Schedule A

Energy Consumption and Greenhouse Gas Emissions Reporting - for 2012