



Energy Conservation and Demand Management Plan Municipality of Oliver Paipoonge 2011 to 2018

COMMITMENT

Declaration of Commitment: The Municipality of Oliver Paipoonge 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*. Such a strategic plan will reduce Municipal energy consumption and its related environmental impact. The commitment of the Municipality of Oliver Paipoonge is to provide quality programs and services that are cost effective, environmentally responsible, innovative and respectful of our natural heritage. In keeping with the goal to remain environmentally responsible, all reasonable effort will be taken to minimize impacts to the environment through the development and implementation of a sustainable development and environmental management system. This will maximize waste diversion and reduce energy consumption by focusing on sustainable planning, healthy community design and environmental stewardship. Staff and council will update the plan as required under Regulation 397/11 of the Green Energy Act or any subsequent legislation.

Vision: The Municipality of Oliver Paipoonge will strive to continually reduce our 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 taxpayers 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, natural gas, and propane. This vision can be achieved through the integration of energy efficient 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 Municipality of Oliver Paipoonge 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. 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 analyses and policies of the municipality. All departments have clear links to the goals and objectives of the Energy Conservation and Demand Management Plan.

Goals: The Municipality of Oliver Paipoonge's Conservation and Demand Management Plan was completed to help achieve the following goals:

1. Maximize fiscal resources and avoid cost increases through direct and indirect 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.

Overall Target: We will reduce our overall municipal energy consumption from all facilities, including streetlights by 5% from 2011 (based on baseline data) to 2018.

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 annually.
3. Better analyze energy costs and look for savings opportunities. This will include looking at energy commodity procurement options (where applicable) 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 where feasible.

ORGANIZATIONAL UNDERSTANDING

Our Municipal Energy Needs: The Municipality of Oliver Paipoonge needs reliable, low-cost, sustainable energy sources delivering energy to the most efficient facilities and energy-consuming technology feasible. Concerns surrounding energy consumption with regards to climate change and pollution have been well-documented and increasingly growing for some time now. These concerns are with good reason, since Ontario's greenhouse gas emissions have already increased 14% since 1990. It is estimated that 75% of this is due to energy consumption and production, so the sooner we reduce our consumption or find alternative methods of obtaining the energy, the sooner we, as Ontarians, can reduce our impact on the

environment. Finance-wise, we can now see that fossil fuels are becoming completely unreliable as their financial accessibility lessens and their environmental impacts worsen. We're now paying colossal prices compared to what they were at the turn of the century, so in order to stay within municipal budgets, we must curb our energy usage.

Stakeholder Needs: Internal stakeholders (Council, CAO, Managers, 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: 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 issues:

- Energy use and costs continue to increase and are forecasted 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 and the Official Plan.

How We 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: Our 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 (EPT). Invoices are entered into the EPT, consumption/trends are analyzed, and reports are generated.

Energy Supply Management: Our municipal energy is supplied via a number of providers: electricity is supplied by Hydro One and natural gas by Union Gas on an as needed basis and is priced at the standard rates offered by the provider.

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 Oliver Paipoonge 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. Our energy usage is updated monthly in the Energy Planning Tool (EPT) and reported annually to the Ministry of Energy. Annual Reports will be added to the Appendix as completed each year.

Summary of Current Technical Practices: Our 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 when possible.
- Enhancement of preventative maintenance procedures when possible.

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 significantly reduce the energy requirements of a building along with the associated greenhouse gases. The Municipality of Oliver Paipoonge 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, if the opportunity arises and is a feasible venture. When proposing the construction of new facilities, renewable energy options will be investigated.

STRATEGIC PLANNING

Links with other municipal plans: The Municipality of Oliver Paipoonge 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, procurement policy, preventative maintenance plans, environmental management plan, asset management plan and the policy development process.

STRUCTURE PLANNING

Staffing requirements and duties: The Municipality of Oliver Paipoonge will incorporate energy efficiency into standard operating procedures and the knowledge requirements for operational jobs. All staff members will be made aware of the municipality's energy conservation efforts and why they're important. Staff will be expected to make any changes

they can in their daily routines that could help reduce energy consumption, as well as keep up with operational standards. Staff will be updated about the results of energy audits and be given suggestions on how to improve their energy consumption at their jobs. Updates on their rate of success or improvement will also be given to staff members so they will be encouraged to continue their efforts.

Consideration of energy efficiency for all projects: The Municipality of Oliver Paipoonge 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 & Feasibility
2. Energy Audits, Feasibility Analysis or through detailed Condition Assessments.
3. Planning & Budgeting - Project Financing, Incentives, Business Case & Approvals
4. Implementation: Tender, Project Execution, Project Management, Commissioning
5. Monitoring & Verification: Measure and Verify Results, Reporting Achievements

The intent is to make this 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: The Treasurer has been designated as our energy leader with overall responsibility for corporate energy management.

Energy Team: Staff members from the Senior Management Team and personnel from our critical service providers who carry significant responsibility for energy performance or who can make essential input to energy management processes form the energy team.

Internal Resources: Internal resources will be utilized when possible the implementation of energy projects. External resources may need to be utilized from time to time for technical expertise.

External Consultants and Suppliers: We will establish criteria in our Procurement Policy based on our energy goals and objectives for the selection of external consultants and energy suppliers. These criteria will include a lifecycle cost analysis of desired products and services whenever possible.

Energy Training: The Municipality of Oliver Paipoonge 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 include everyone who makes energy consumption decisions 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. 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 Municipality 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 Municipality of Oliver Paipoonge, if feasible, will negotiate energy purchase contracts that appropriately address our 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. Monthly billing analysis provides an opportunity to identify and recover any billing errors, or usage that requires further investigation.

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. Effort will be made to purchase equipment and materials that are energy efficient and decisions will not be based solely on their short-term economic feasibility. In addition, an examination will be done of current materials and equipment to assess if it might be feasible to replace some of the less energy efficient items the Municipality of Oliver Paipoonge utilizes.

IMPLEMENTATION PLANNING

Communication Programs: The Energy Leader, in cooperation from the Energy Team, 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 energy efficiency training.

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 Municipality of Oliver Paipoonge 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.

INVESTMENT PLANNING

Internal Funding Sources: 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 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 conservation and demand management and will be factored in accordingly.

Creative Approaches: The Energy Leader will investigate, document, and communicate funding sources for energy projects, including government and utility grants and incentives.

PROJECTS EXECUTION

Municipal Level: The administration and implementation of this Energy Conservation and Demand Management Plan will be the responsibility of the Senior Management Team. 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 based 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 should be effectively aware of what they can do to help out. Although facilities staff have 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 are to be conducted on the municipal facilities as part of this plan and should continue to occur on a regular schedule in the future for new and existing facilities. Staff members should be made aware of energy audits and their results and should receive recommendations of what they could do to improve results. Another important component of an energy management program is 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 sometimes 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. 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, but 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.

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. Staff will develop an annual progress

report with energy consumption data and initiatives undertaken within the calendar year and will report to Council. As part the Energy Plan, the implemented processes improvements, program implementation and projects will continued 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.

EVALUATION PROGRESS

Energy Consumption: We will review and evaluate our energy plan, revising and updating it as necessary, on an annual basis as based on the Energy Consumption Reports that are submitted to the Ministry of Energy 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. 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 Municipality of Oliver Paipoonge is committed to these objectives through the development and implementation of this Energy Conservation and Demand Management Plan. 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.

Baseline Data: Since 2011 and 2012 were the initial years of energy reporting to provide baseline data, as we move forward with energy reporting for 2013 and beyond, we will be able to quantify the energy savings from the implementation of the programs, processes and projects of this plan.

PROGRAMS, PROCESSES AND PROJECTS

The following programs, processes and projects are based on best practices for energy efficiency and on energy audits that were completed by Local Authority Services (LAS). The Oliver Paipoonge Municipal Office, the Murillo Hall, the NorWest Recreation Centre, the Murillo Fire Hall and the Rosslyn Fire Hall were each audited in late 2013. These facilities were chosen to be audited based on 2011 reported energy use as being the buildings that required further investigation based on a higher occupancy rate and increased energy usage. The audit provided no significant findings for the two fire halls.

Programs

Description	Facility	Lead/Contact	Implementation Date	Status
Add energy awareness to management meetings	All	CAO/Clerk	2014	Pending
Details	Energy reports to be distributed to managers on an annual basis.			
New Employee Orientation	All	Deputy Clerk	2014	Pending
Details	As part of Orientation Program provide new staff with energy management training.			
Visual Displays	All	Treasurer/ Deputy CAO	2014	Pending
Details	<p>Make use of visual displays to demonstrate to staff the implications of current behaviours. 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. -- annual reports posted in staff lunchroom(s) -- graphic representation of progress made towards energy conservation goal 			
Energy Leader	All	Treasurer/Deputy CAO	2014	Active
Details	<p>The Treasurer has been designated as the Energy Champion within the Municipality of Oliver Paipoonge. 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 - ensuring energy efficiency is included in procurement 			

Description	Facility	Lead/Contact	Implementation Date	Status
Employee Engagement	All	Senior Management Team	2014	Pending
Details	<p>Although the adoption of energy efficient technology usually forms the basis for energy conservation projects, there is a behavioural 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 behavioural 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> <p>-- Identification of improvements. Staff will be encouraged to submit ideas for process improvements or projects that will reduce the corporate and personal energy consumption. Senior management and/or the energy champion will review these messages on a regular basis.</p> <p>-- Have different staff walk through facilities on an annual basis. Enabling staff from different departments to walk through another's facility once a year will highlight some wasteful practices that the regular inhabitants have become unaware of. Organizational behaviour research states that staff have become 'blind' to existing practices once they are in a given organization or facility for more than six months.</p>			

Processes

Description	Facility	Lead/Contact	Implementation Date	Status
Life- Cycle Costing	All	Treasurer/ Deputy CAO	2014	Pending
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</p>			
Appliance Usage	All	Treasurer/ Deputy CAO	2014	Pending
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 Nowhere.</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>Altogether, phantom energy can account for about 10 percent of a building's electricity</p>			

	<p>use. Staff will identify unnecessary plug loads and eliminate phantom power.</p> <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. For example, a single 1500 watt heater would cost \$300-500 per year to operate if it is used 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>			
Description	Facility	Lead/Contact	Implementation Date	Status
Enhance Procurement Policies	All	Treasurer/ Deputy CAO	2014	Pending
Details	<p>Municipalities purchase a large number of products--all of which require energy and resources to produce, package, transport, use, and dispose. Choosing products with minimal life-cycle impacts can save energy, reduce operating costs, reduce emissions, and increase the market for high performance products. The Municipal Procurement By-Law and related policies are currently being updated. This provides an opportunity to update for new responsibilities and types of analyses including lifecycle costing.</p>			
Review Rental Rates and User Fees	Community Halls, NorWest Rec Centre, Museum	Senior Management Team	Ongoing	Pending
Details	<p>The municipality currently rents facilities to local residents at various rates. It is recommended that these rates be reviewed from time to time to reflect rising energy costs.</p>			

Projects

The estimated energy savings for the following projects are noted if known. Further technical investigation is required for some projects. Other facilities will be audited if deemed necessary based on energy usage as compared year to year and more projects added as required within budgetary limits.

Description	Facility	Lead/Contact	Implementation Date	Status
Upgrade HVAC system	Oliver Paipoonge Municipal Office	CAO	October 2013	Completed
Details	<p>The 30 year old low efficiency gas furnace and air conditioning unit was replaced with a high efficiency gas boiler and air conditioning unit.</p> <p>Estimated energy saving: The energy saved will be tracked between 2012 to 2014.</p>			
Replace Metal Halide lights with LED – Arena Surface	NorWest Recreation Centre	Community Services Manager	July 2014	Completed
Details	<p>Replace 18-1000W Metal Halide High Bay lights with 18 – LED one lamp fixtures.</p> <p>Estimated energy Savings: 28,504 kWh</p>			

Description	Facility	Lead/Contact	Implementation Date	Status
Replace T12 Lighting with T8	Oliver Paipoonge Municipal Office	Community Services Manager	June 2014	Completed
Details	Replace 47-T12 four lamp with 47-T8 four lamp fixtures. Replace 12-T12 two lamp with 12-T8 two lamp fixtures. Replace 2-T12 one lamp with 2-T8 one lamp fixtures. Estimated energy savings: 7,797 kWh			
Re-insulate Boiler Room	Oliver Paipoonge Municipal Office	Community Services Manager	August 2013	Completed
Details	Re-insulate and drywall outside wall of boiler room as insulation was water damaged and missing in some areas.			
New Windows	Murillo Library	Community Services Manager	August 2013	Completed
Details	Replace the windows in the upper floor of the library with energy efficient ones.			
Replace windows at South Garage	South Garage	Public Works Superintendent	2014	In progress
Details	Although the Municipality does not pay for the energy costs at this building, it owns the building and therefore has a vested interest in maintaining the building. In replacing the old windows with energy efficient ones, the tenant will have reduced energy costs.			
Replace T12 Lighting with T8	Murillo Community Hall	Community Services Manager	2015	Pending
Details	Replace T12 four lamp with T7 lamp fixtures.			
Insulation – above Olympic Room	NorWest Recreation Centre	Community Services Manager	2014	Pending
Details	Insulate the ceiling above the Olympic Room as there is no insulation there.			
Replace Doors	NorWest Recreation Centre	Community Services Manager	2014	Pending
Details	Replace the 2 doors at the rear of the arena as the old ones have shifted and do not line up with the frame or close properly.			
Exterior Lighting	NorWest Recreation Centre	Community Services Manager	2015	Pending
Details	Replace 13 exterior wall packs with LED fixtures. Estimated energy Savings: 7,000 kWh Replace 5 pole mounted fixtures in parking lot with LED fixtures. Estimated energy savings: 3,000 kWh			

Description	Facility	Lead/Contact	Implementation Date	Status
Streetlights	NorWest Recreation Centre	Public Works Superintendent	2015	Pending
Details	Replace all streetlights with LED fixtures. An inventory of types and locations of streetlights is being undertaken. Estimated Energy Savings: 80,000 to 135,000 kWh			
Lighting Control Strategies	All	Senior Management Team	2015	Pending
Details	Add occupancy sensors to rooms that are not used frequently.			
Power Bars	All	Senior Management Team	2015	Pending
Details	Purchase power bars with integrated timer and shut offs for all office equipment to reduce phantom power load.			
Door Weather stripping/seals	All	Senior Management Team	2015	Pending
Details	Replace any worn weather stripping/seals on doors as required,			
Chiller Replacement	NorWest Recreation Centre	Community Services Supervisor	2016	Pending
Details	Replace the aging chiller with an energy efficient one.			