

**The Corporation of the City of Temiskaming Shores**

**By-law No. 2019-100**

**Being a by-law to adopt a Corporate Energy Conservation and Demand Management Plan for the City of Temiskaming Shores**

**Whereas** under Section 8 of the Municipal Act, 2001, S.O. 2001, c. 25, as amended, the powers of a municipality shall be interpreted broadly to enable it to govern its affairs as it considers appropriate and to enhance the municipality's ability to respond to municipal issues;

**And whereas** under Section 9 of the Municipal Act, 2001, S.O. 2001, c. 25, as amended, a municipality has the capacity, rights, powers and privileges of a natural person for the purpose of exercising its authority under this or any other Act;

**And whereas** under Section 10 (1) of the Municipal Act, 2001, S.O. 2001, c. 25, as amended, a single-tier municipality may provide any service or thing that the municipality considers necessary or desirable for the public;

**And whereas** Council considered Memo No. 012-2019-PW at the June 18, 2019 Regular Council meeting and directed staff to prepare the necessary by-law to adopt to repeal By-law No. 2016-102 and adopt an Energy Conservation and Demand Management Plan for the City of Temiskaming Shores for consideration at the June 18, 2016 Regular Council meeting.

**Now therefore** the Council of The Corporation of the City of Temiskaming Shores hereby enacts the following as a by-law:

1. That Council hereby adopts a Corporate Energy Conservation and Demand Management Plan for the City of Temiskaming Shores, attached hereto as Schedule "A" and forming part of this by-law;
2. That By-law No. 2016-102 being a by-law to adopt a Municipal Energy Plan for the City of Temiskaming Shores is hereby repealed;
3. That the Clerk of the City of Temiskaming Shores is hereby authorized to make any minor modifications or corrections of an administrative, numerical, grammatical, semantically or descriptive nature or kind to the by-law and schedule as may be deemed necessary after the passage of this by-law, where such modifications or corrections do not alter the intent of the by-law.

**Read a first, second and third time and finally passed** this 18<sup>th</sup> day of June, 2019.



Mayor – Carman Kidd



Clerk – David B. Treen



# City of Temiskaming Shores

## 5-Year Corporate Energy Conservation and Demand Management Plan

July 2019

Prepared in co-operation with:



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## **Introduction – Executive Summary**

### **Background**

The City of Temiskaming Shores' Energy Conservation and Demand Management (ECDM) Plan was developed in response to Ontario Regulation 507/18 which requires all public sector organizations to complete an update to their original 2014 ECDM Plan by July 1, 2019. In response to this regulatory requirement, as well as rising energy costs, the City of Temiskaming Shores has developed this Energy Conservation and Demand Management (ECDM) Plan. This comprehensive Plan is the most effective method of identifying energy conservation opportunities, selectively implementing the best projects and then measuring their effectiveness. The Plan has been developed to protect the interests of our constituents and ensure that the City of Temiskaming Shores obtains the best possible value from our operating budgets. In addition to meeting our regulatory obligations, the City believes that a strong commitment to energy management and a reduction of energy use is demonstrated evidence of our belief in becoming a more sustainable community while operating in a cost-effective manner that respects the value of taxpayer dollars.

### **Purpose of the Plan**

The 5-Year Corporate Energy Conservation and Demand Management Plan is designed to guide the City of Temiskaming Shores towards a more energy-efficient future. The policies, practices and energy conservation measures identified illustrate the importance the City places on acting responsibly towards energy consumption through the wise use of resources in City operations.

To enhance our understanding of energy use and return on investment through conservation, this document contains a thorough review of the measures implemented since the creation of the original plan, issued on July 1, 2014. Since then, the City has initiated several substantial energy projects, yielding significant savings results including:

- City-wide street lighting replacements (2015)
- LED lighting conversions of various facilities (throughout the Plan period)
- Operations equipment upgrades (throughout Plan period)

The above projects have resulted in an estimated annual savings of over \$200,000.

The wise and efficient use of energy are two of the lowest cost options for meeting energy demands. They also provide many other environmental, economic and social benefits, including reducing greenhouse gas (GHG) emissions, cost avoidance and savings. Along with the primary benefits, the responsible use of energy also promotes local economic development opportunities, energy system reliability, improved energy supply security and reduced-price volatility.

Following the path of our previous ECDM Plan, this document is a continuation of a process involving the:

- Integration of establishing and evaluating a baseline for performance to be measured against;
- Reviewing the effectiveness of previous conservation efforts while setting future performance goals and objectives;
- Continuous improvement through identification of energy conservation potential;
- Strategic alignment of improvement measure implementation and fiscal constraints; and,
- Evaluation, measurement and communication of results achieved.

The following report summarizes the significant efforts applied by the City of Temiskaming Shores Conservation Team to create a Plan that can be implemented responsibly, over time, to create lasting results. The Plan takes advantage of internal expertise as well as all available external financial incentives and rebates currently being offered to support the implementation of energy savings ideas. The current energy picture for the City of Temiskaming Shores and our Vision, Goals and Objectives as shown in the Corporate Energy Conservation and Management Policy, are outlined. Our strategic focus areas are discussed in detail and our 5-year Action Plan is laid out on a project-by-project basis.

## 1.0 Historic Energy Performance

### Historical Energy Usage

Effectively managing energy requires the creation of a robust energy monitoring strategy and procedures and establishing an accurate energy baseline is an essential first step in this process. This baseline assists with energy conservation and greenhouse gas reduction target setting, energy procurement and budgeting, bill verification, energy awareness, and the selection and assessment of potential energy projects. The City of Temiskaming Shores, similar to many other communities, relies on utility bills to establish this energy baseline.

To evaluate the effectiveness of the City's previous energy conservation measures, the year 2013 was chosen as the base year for measurement; this aligns with the Ministry of Energy's Regulation 507/18 requirements for reporting. Overall, the City's consumption in 2013 was 5.9 million kWh of electricity and 584,000 m<sup>3</sup> of natural gas. The breakdown of energy use by facility type is as follows:

Figure 1-1 – Energy Use by Facility Type in 2013

Facility Type	Electricity Use (1,000's kWh)	Natural Gas Use (1,000's m3)
Administrative offices and related facilities, including municipal council chambers	512.97	31
Community centres	46	50
Cultural facilities	0	-
Facilities related to the pumping of sewage	336	-
Facilities related to the pumping of water	304	-
Facilities related to the treatment of sewage	1,222	-
Facilities related to the treatment of water	1,766	12
Fire stations and associated offices and facilities	104	49
Indoor ice rinks	454	52
Indoor recreational facilities	278	77
Indoor swimming pools	443.75	195.80
Public libraries	65.57	23.07
Storage facilities where equipment or vehicles are maintained, repaired or stored	296.09	94.97

For comparative purposes, the raw energy consumption breakdowns by month since the original baseline for the City are as follows:

Figure 1-2 – Electricity Use (2014 – 2018)

**January 2014 - December 2018**

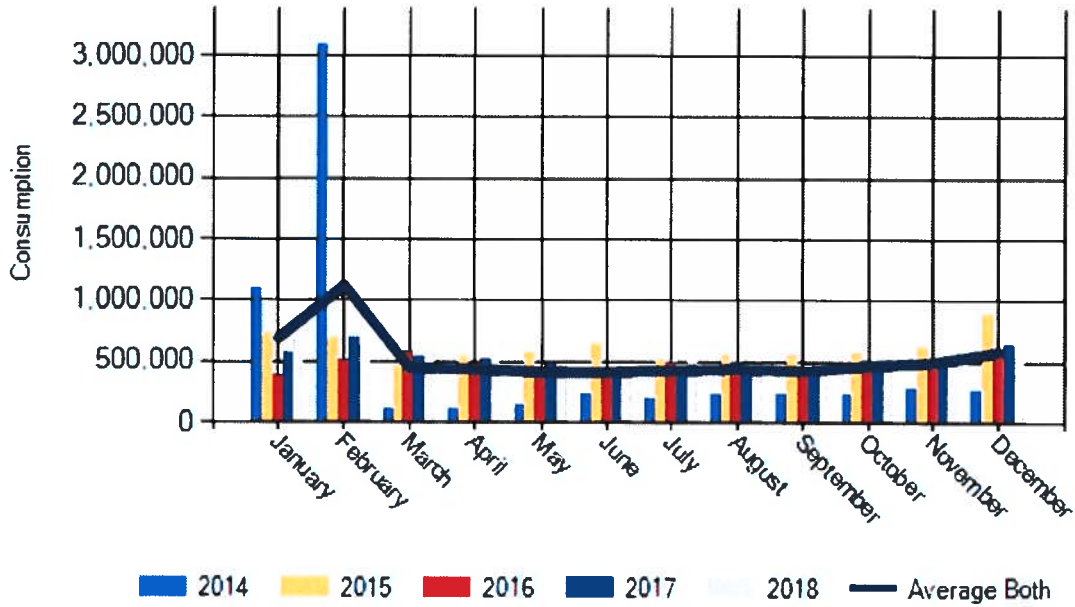
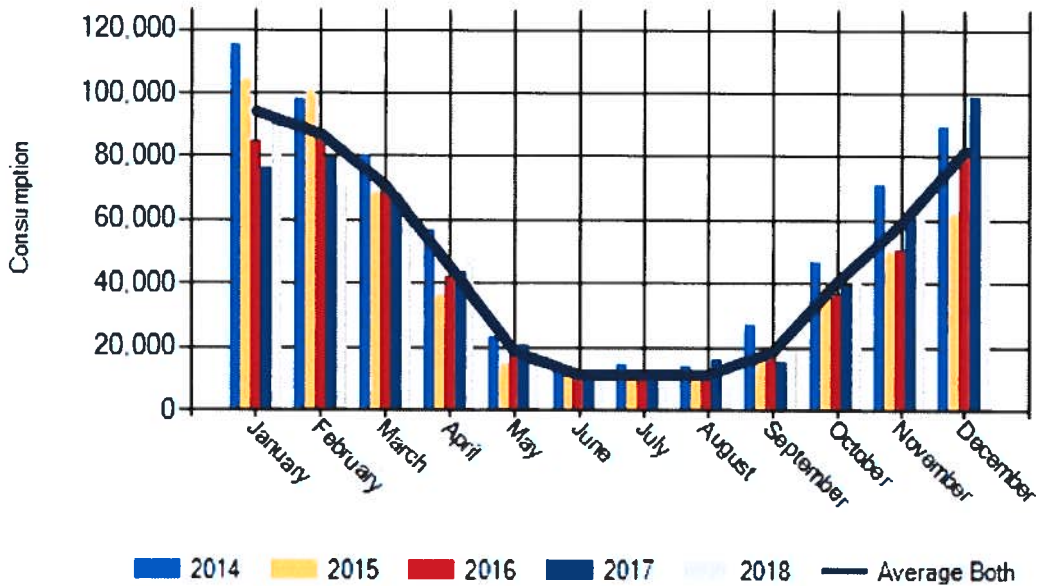


Figure 1-3 – Natural Gas Use (2013 – 2018)

**January 2014 - December 2018**



## City of Temiskaming Shores Energy Baseline Analysis

The following analysis uses RETScreen analysis of consumption data for the base year (2013) forward. This type of review allows for an objective evaluation of conservation progress by removing the variables that can independently affect energy consumption and are largely out of the City's control (i.e. weather, temperature, cooling or heating degree days).

In the original ECDM Plan, the City set a target of a 1-5% reduction in energy consumption over the 5-year term of the Plan (2014-2019). The chart below outlines the methods by which the City intended to meet this target.

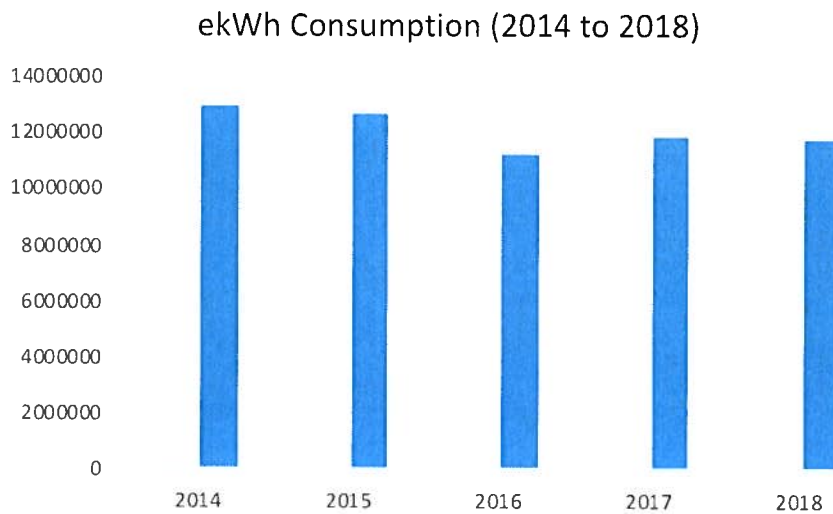
Figure 1-4 Energy Management Initiatives from the City's Original CDM Plan (Source: City of Temiskaming Shores 2014 CDM Plan):

Program/ Policy	Program/ Policy Objective	Number
Official Plan	Sets the goals, objectives and policies to guide growth and development within the City for the next 20 years, while creating opportunities for sustainable and energy efficient Development for conservation, and to encourage the use of green infrastructure and systems.	By-law 2014-040
Vehicle & Equipment Idling Policy	Places limitations on engine idling for the City's entire fleet to reduce air pollution; promote fossil fuel conservation; reduce noise pollution; and to reduce wear and service needs on the fleet.	By-law 2014-031
Energy Efficiency at City Hall	To ensure City Hall is as energy efficient as possible by implementing a temperature set point.	Motion 2013-557
Asset Management Plan & Management Policy	To ensure the City assets are well managed/maintained to meet performance levels used to deliver service, and that consider environmental and energy conservation goals.	By-law 2013-202
Issuance & Enforcement of Water Conservation in the City of Temiskaming Shores	Restricts water used at the discretion of Council from time-to-time.	By-law 2006-051



In order to adequately assess the City's energy conservation progress, an examination of the Equivalent Kilowatt Hours (ekWh) must be conducted. This allows for natural gas and electricity consumption to be reviewed together. The City's overall ekWh energy consumption between 2014 and 2018 declined by 1.1 million (2014 – 12.9 million ekWh, 2018 – 11.7 million ekWh) meaning the City exceeded its target with an overall 9% reduction in annual ekWh consumption over the 5-year period.

Figure 1-5 Equivalent Kilowatt Hour Energy Consumption (ekWh)



While electricity consumption remained relatively stable, natural gas consumption declined by 19% with the bulk of the change occurring between 2014 and 2015.

Figure 1-6 Natural Gas Consumption (m<sup>3</sup>)

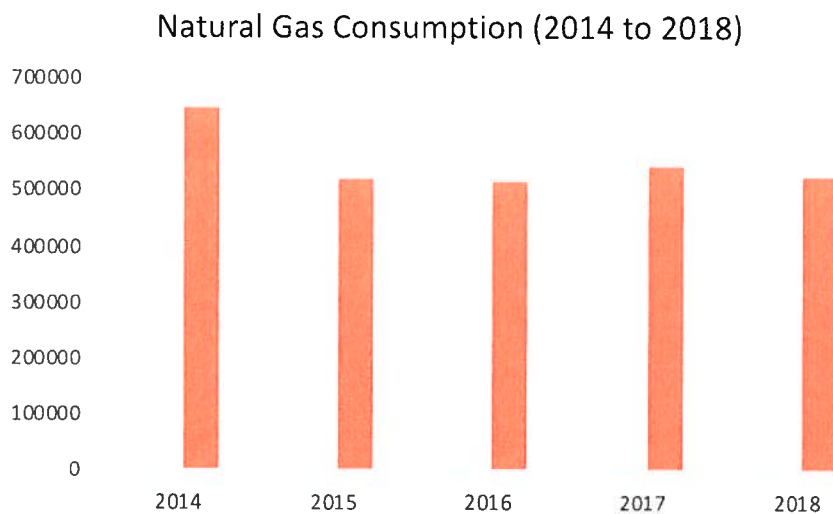
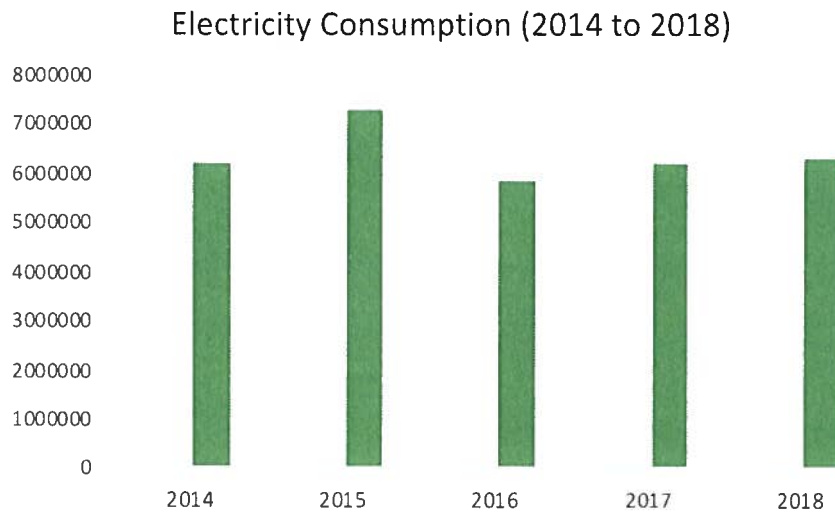


Figure 1-7 Electricity Consumption (kWh)



### **Energy Conservation Project Successes**

Since the creation of the last 5-Year ECDM Plan, the City has initiated significant investments in energy efficiency and energy-cost reduction. These projects include:

#### **Facility-Related Projects**

##### **2013**

- LED lighting retrofits for the Public Works #2, New Liskeard Water Treatment Plant (WTP), New Liskeard Arena and Haileybury WTP

##### **2014**

- HVAC upgrades for the New Liskeard WTP, Riverside Place and City Hall

##### **2015**

- Humidification system upgrades at the Pool and Fitness Centre

##### **2016 to 2018**

- Looping of water systems
- Upgrading of removal filters
- Replacement of motor control centers (MCCs)
- LED lighting upgrade for Haileybury Arena surface lighting, City Hall and Haileybury Medical Centre
- High Efficiency Furnace Upgrades

##### **2019**

- Conversion of the New Liskeard Medical Centre to Library Use

### **City-Wide Street Lighting**

In 2015 the City of Temiskaming Shores embarked on a major street lighting retrofit across the City. This project included the replacement of over 1,250 HPS street lights, leading to an annual savings of over \$100,000. The City received project funding incentives to complete this project.

## **2.0 Energy Conservation and Management Policy**

### **Our Commitment**

The City of Temiskaming Shores is committed to allocating staff and resources to develop and implement a strategic Energy Conservation and Demand Management (ECDM) Plan that will reduce energy consumption and its related environmental impact. As an organization, we value the notion of efficient operations and creating a more sustainable community. The ECDM Plan builds on our previous Municipal Energy Plan as well as our Greenhouse Gas Emissions Reduction Plan. These plans are all aimed at reducing our energy costs and creating a more sustainable community.

We are committed to managing energy responsibly and will use energy efficiency practices throughout our facilities, fleet, operations and equipment wherever it is cost effective to do so.

### **Our Vision**

The City of Temiskaming Shores will endeavour to minimize energy consumption, related costs, and carbon emissions by continuously improving its energy management practices without compromising the level of service delivery to the community.

### **Our Goals and Objectives**

As part of our 2019 ECDM Plan, the City created several strategic avenues to achieve specific goals and targets with regards to energy management. We have re-examined our past objectives and are re-committing to this updated version.

1. Reduce energy intensity in City facilities by 5% by 2024 compared to our revised base year (2018). This is in addition to the reductions achieved between 2013 and 2018, based on our original 2011 base year.
2. Enhance our culture of conservation through training and outreach to staff, clients and business partners. All employees will have the appropriate knowledge and training to be empowered to reduce energy consumption.
3. Expand upon our comprehensive corporate energy management policy and practices by enhancing key existing business practices to include energy efficiency standards and energy management best practices.
4. Expand our monitoring and tracking program for energy use by providing access to our energy management system to make energy consumption visible to everyone in the Corporation and support facility/management decision-making.

5. Deliver energy cost savings through the identification and implementation of processes, programs and projects that will reduce energy consumption.
  - Re-assess and benchmark the top energy consuming facilities across the Corporation (2019)
  - Review previously identified energy savings opportunities by reviewing past energy audits and plan to renew energy audits and analysis of the capital asset renewal program. (Ongoing)
  - Review and/or enhance standard operating and maintenance procedures to include energy conservation best practices. (Ongoing)
  - Seek funding for energy-related projects from various sources to enhance the payback and reduce implementation costs. (Ongoing)

### **Strategic Action Plan**

To achieve our new ECDM Plan, the City will employ the following strategic actions designed to ensure a positive outcome over the next 5 years. These key strategies support the delivery of our Goals and Objectives.

#### **Strategy 1. Corporate Practices**

Expand upon our policies and practices that support the energy conservation effort and show leadership and commitment within the Corporation and community.

- Energy Management Team: Roles, Responsibilities and Accountability
- Energy Procurement
- Renewed focus on reducing our energy footprint in day-to-day operations

#### **Strategy 2. Education, Awareness & Outreach**

Provide the guidance and leadership necessary to empower employees and develop a culture of conservation.

- Energy Skills Training Program
- Energy Awareness Training
- Outreach, Engagement and Recognition Programs
- Feedback System for Employee Suggestions
- Employee Brainstorming Sessions

#### **Strategy 3. Energy Conservation Action Plan and Energy Information Management**

Continually identify and deliver energy conservation processes, programs and projects in all areas of the Corporation (facilities, fleet, equipment, water plants etc.). Demonstrate sound operating and maintenance practices to complement the energy efficiencies implemented through the capital asset renewal program. Employ a robust Energy Information Management System to ensure that all conservation activities are measured and verified to ensure the City receives and maintains specified energy reductions and savings.

**Energy Conservation Action Plan**

- Key facility energy audits and re/retro-commissioning studies
- Asset renewal plan and energy conservation project delivery
- Standard facility operations procedure review

**Energy Information Management**

- Maintenance of the online energy monitoring and reporting system (electricity, natural gas and fuels)
- Regular Energy Use Review presentations for the community, council, accountable staff and energy users
- Energy bill verification and rate optimization
- Reporting requirements for Regulation 507/18 (formerly 397/11)
- Consistent updates and review of key performance indicators (KPIs) / Benchmarking
- Standardize and implement project measurement and verification

### **3.0 STRATEGY 1: Energy Management Corporate Practices**

The City of Temiskaming Shores has implemented several corporate practices, including key personnel deployment, to ensure a strong focus on energy management and savings. These efforts remain a key component of our renewed ECDM Plan.

#### **The Energy Management Team: Roles and Responsibilities**

##### **Energy Sponsor and Champion: Manager of Physical Assets**

The Energy Sponsor and Champion is ultimately responsible for creating budgets, securing spending authority and resources for the program. This role is responsible for setting the program's high-level vision, goals and objectives, keeping track of major project activities and approving resources and funding for the team and its approved projects. The Energy Sponsor and Champion has direct knowledge of the organization's major energy-using systems and is responsible for developing and maintaining the focus for the Energy Management Team. In addition, this role coordinates meetings, set agendas, and delegates and manages tasks related to the Energy Management Team and is responsible for ensuring that the monitoring and tracking systems for energy are accurate, up-to-date and available for use by City employees.

##### **Corporate Energy Management Team**

The Corporate Energy Management Team functions on a strategic level to set expectations for each of the facilities, develop metrics for tracking overall energy improvement, and build accountability for energy management activities. In addition, this cross-functional team has direct responsibility for the consumption of energy within their respective departments. As a group, the team supports and monitors the energy management initiatives (processes, programs, and projects) at the various facilities and across the corporation.

The Energy Management Team at City of Temiskaming consists of the Building Maintenance Committee, which currently includes the following members:

- Danny Whalen - Chair and Council Member
- Doug Jelly - Council Member
- Carman Kidd - Mayor
- Chris Oslund – City Manager
- Doug Walsh –Director of Public Works
- Steve Burnett –Technical & Environmental Compliance Coordinator
- Kelly Conlin –Executive Assistant
- Mitch Lafreniere –Manager of Physical Assets

**Actions:** Continue to seek cross-departmental membership and support for the Energy Management Team. Continue to meet bi-weekly to discuss the Energy Management Program to ensure implementation of new savings ideas, as well as maintain the positive momentum built over the past 5 years.

### **Energy Procurement**

The City continues to utilize the energy procurement service provided by Local Authority Services (LAS). This program provides options for fixed-price energy procurement services to maintain predictable electricity and natural gas commodity costs. In addition, the program permits the City to work together with a large number of other municipal entities throughout the province to create bulk-buying power to leverage aggregated energy purchasing opportunities.

**Actions:** Continue to review the LAS program annually and evaluate the City's level of participation. Review potential alternative programs for merit and analyze the net result of participation annually.



## **4.0 STRATEGY 2: Education, Awareness and Outreach**

The City's Education, Awareness and Outreach program has been utilized over the past 5 years to assist with the maintenance of a culture of conservation. This has been achieved by raising the level of awareness, understanding and general knowledge amongst staff regarding energy spending, usage and conservation. The City will continue to utilize a successful combination of program engagement, direct awareness marketing and hands-on training to enhance our energy reduction efforts to support the achievement of our energy conservation goals and objectives. As well, energy will continue to be a regular agenda item at staff meetings to solicit new ideas for reduction of energy use, promote continued awareness of the cost of energy and ensure that energy conservation remains a key consideration for all City employees.

The Education, Awareness and Outreach program provides guidance, leadership and the framework to empower employees and foster our culture of conservation. The program informs the organization of current energy use, operational practices as well as improvement opportunities, while ensuring that all employees have an opportunity to remain informed of the City's energy reduction efforts. This continued practice will foster the greatest possible impact of education and awareness.

The program is comprised of the following four focus areas:

### **Energy Skills Training Program**

The Energy Skills Training Program is a vehicle for City employees to continue to develop a general awareness and understanding of current energy use within City facilities as well as skills to identify opportunities for improvement. The Training Program combines both general knowledge training and hands-on experience to gain maximum benefit.

Employee Brainstorming Sessions are an important part of the Energy Skills Training Program and are encouraged during the Energy Team meetings as a way of generating new ideas for energy conservation. As regular users and managers of City facilities, our employees are one of the City's most valuable resources to both generate and implement our energy conservation strategies.

### **Outreach, Engagement, Recognition and Energy Awareness Training Program**

The City will continue to engage all users of City facilities (both staff and the general public) and recognizes that this is essential to the continued success of the energy management program. Our energy program will continue to employ a comprehensive approach to both engaging employees and recognizing the efforts of City staff who provide important support and ideas.

The Energy Awareness Training Program has been developed to provide consistent energy conservation messaging throughout all departments using Community-Based Social Marketing (CBSM) techniques to engage all users of City facilities.

Specific methods used to date include conservation tips, eye-catching posters, City intranet messaging and other relevant marketing tools. It is the intention of this Plan to expand our ability and focus to enable the City to become a 'clearinghouse' of information for local residents to discover ideas and incentives to improve their own energy usage practices.

### **Feedback System for Employee Suggestions**

The City will continue to employ a feedback system to encourage employees to provide input and ideas. The email messages are sent to a specific address and are forwarded to members of the Energy Management Team in order to ensure prompt response. The Energy Team members can engage relevant employees to ensure that all suggestions are captured and explored.

**Actions:** Review available energy training opportunities both generally (i.e. all staff) and for specific facilities (i.e. water plant). Establish and maintain at least annual Outreach and Engagement efforts to keep energy conservation 'top-of-mind' for staff and stakeholders.

## **5.0 STRATEGY 3: Energy Conservation Activities and Information Management**

### **Energy Conservation Action Plan**

The Energy Conservation Action Plan forms the blueprint for implementing energy conservation and cost saving measures. The City has created a list of potential projects based on previous facility energy audits. The attached action plans have been created to guide this process based on a prioritized implementation schedule. All available incentives and funding sources will be explored to minimize the implementation cost of each measure. In addition to the measures shown, the City anticipates that further energy audits, completed over the next 5 years, will augment the list of available energy conservation measures.

Below is our current list of known projects to be implemented during the life of this Plan. In all, the measures will include:

- LED lights on New Liskeard Arena surface (2019)
- LED upgrades to decorative lights in downtown cores (throughout the life of the Plan)
- Boiler and lighting upgrades for the New Liskeard Library (2019)

Additional measures will be added as funding becomes available on an annual basis. In general terms, our actions are expected to yield the following results:

- Education, Awareness and Outreach: 1-2% annual energy savings
- On-going regular reviews of consumption and baselines: .5% to 1% annual energy savings
- Re/retro Commissioning: 2-7% annual energy savings within the facilities where it is implemented (estimated to be 1% overall potential total annual savings)

**Actions:** Maintain a schedule of energy audit and re/retro-commissioning renewals to ensure that our list of measures is up-to-date and that previous measures are still functional and providing savings. Perform periodic reviews of available incentives and stay up-to-date on potential sources of funding to offset the implementation costs of the proposed future measures. Review the list of measures at least annually and update as necessary.

## **Energy Information Management**

### **Online Energy Monitoring and Reporting System**

The City of Temiskaming Shores currently has a system for managing and reporting its energy consumption (electricity, natural gas, fuels). The motivation for this effort is the notion that “you can’t manage what you are not aware of”. By making our energy usage visual, and keeping the information real-time, all personnel with access to the information can benefit from understanding the nature of energy use in their facilities, as well as the impact their actions or inactions have on the City’s overall energy cost and budgeting.

In order to enhance our ability to monitor and track the progress of some of our facilities, the City currently employs a Supervisory Analytics program to monitor and track consumption in selected buildings against an established baseline using a CUSUM analysis. This information is also key in evaluating the potential of new conservation projects as well as measuring the effectiveness of initiatives already taken.

**Actions:** Continue to gather and upload energy data into the Energy Information Management System regularly and analyze the data for patterns and savings opportunities using our Supervisory Analytics program.

### **Energy Management Presentations for the Community, Council, Accountable Staff and Energy Users**

To gain traction for the initiatives within this Plan and ensure that the City of Temiskaming Shores reaches its stated reduction targets, it is imperative that information regarding energy usage and cost, as well as the City’s energy conservation plans and projects, are well understood and top of mind of everyone from front-line employees to senior department heads and City Council. This broad awareness will lead to additional buy-in and support for the City’s continued efforts to reduce its energy usage and spending.

**Actions:** Make energy a key topic at staff and senior management meetings as well as provide an update on energy use and conservation to Council at least annually.

### **Key Performance Indicators (KPI’s) and Monitoring and Verification**

To ensure momentum continues, and the City of Temiskaming Shores receives value-for-money with regards to its energy conservation efforts, a rigorous program of establishing KPI’s and then monitoring and verifying ongoing savings is an essential element of this Plan. By establishing agreed upon KPI’s (as suggested in the table below) and then performing regular and frequent monitoring, not only will City personnel be able to verify that savings expected from various projects is achieved, but that the savings continue for the duration of the project or retrofit’s useful life. This practice will protect the City’s investments as well as provide transparency and support for successful savings initiatives

Figure 5.1 – KPI Suggestions

Facility Type	Energy KPIs	Measured Variables
Cultural Facilities, Indoor Recreational Facilities and Community Centres	Baseline Electricity (Summer/Winter/Shoulder Season) <ul style="list-style-type: none"> <li>• kWh / month</li> <li>• Peak kW / month</li> </ul> Baseline Natural Gas <ul style="list-style-type: none"> <li>• m<sup>3</sup> / month</li> </ul> Other Energy Sources	<ul style="list-style-type: none"> <li>• Daily Weather</li> <li>• Occupancy Rates / month</li> <li>• Sheet rentals / month</li> </ul>
Facilities Related to Treatment or Pumping of Water or Sewage	Baseline Electricity (Summer/Winter/Shoulder Season) <ul style="list-style-type: none"> <li>• kWh / month</li> <li>• Peak kW / month</li> </ul> Baseline Natural Gas <ul style="list-style-type: none"> <li>• m<sup>3</sup> / month</li> </ul> Other Energy Sources	<ul style="list-style-type: none"> <li>• Daily Weather (Temperature and Rainfall)</li> <li>• m<sup>3</sup> treated water or waste water / day</li> </ul>
Administrative Offices	Baseline Electricity (Summer/Winter/Shoulder Season) <ul style="list-style-type: none"> <li>• kWh / month</li> <li>• Peak kW / month</li> </ul> Baseline Natural Gas <ul style="list-style-type: none"> <li>• m<sup>3</sup> / month</li> </ul> Other Energy Sources	<ul style="list-style-type: none"> <li>• Daily Weather</li> </ul>
Public Libraries	Baseline Electricity (Summer/Winter/Shoulder Season) <ul style="list-style-type: none"> <li>• kWh / month</li> <li>• Peak kW / month</li> </ul> Baseline Natural Gas <ul style="list-style-type: none"> <li>• m<sup>3</sup> / month</li> </ul> Other Energy Sources	<ul style="list-style-type: none"> <li>• Daily Weather</li> <li>• Occupancy</li> </ul>
Fire Stations and Associated Offices	Baseline Electricity (Summer/Winter/Shoulder Season) <ul style="list-style-type: none"> <li>• kWh / month</li> <li>• Peak kW / month</li> </ul> Baseline Natural Gas <ul style="list-style-type: none"> <li>• m<sup>3</sup> / month</li> </ul> Other Energy Sources	<ul style="list-style-type: none"> <li>• Daily Weather</li> <li>• Occupancy</li> </ul>
Storage Facilities	Baseline Electricity (Summer/Winter/Shoulder Season) <ul style="list-style-type: none"> <li>• kWh / month</li> <li>• Peak kW / month</li> </ul> Baseline Natural Gas <ul style="list-style-type: none"> <li>• m<sup>3</sup> / month</li> </ul> Other Energy Sources	<ul style="list-style-type: none"> <li>• Daily Weather</li> </ul>
Street Lighting	Electricity	<ul style="list-style-type: none"> <li>• Number of Lights</li> </ul>
Recreation and Outdoor Lighting	Baseline Electricity (Summer/Winter/Shoulder Season) <ul style="list-style-type: none"> <li>• kWh / month</li> <li>• Peak kW / month</li> </ul>	<ul style="list-style-type: none"> <li>• Occupancy or Rentals / Month</li> <li>• Opening / Closing Dates</li> </ul>
Fleet	Baseline Diesel Use Baseline Gasoline Use	<ul style="list-style-type: none"> <li>• Number of Vehicles</li> <li>• km driven / month</li> </ul>

**Actions:** Review all conservation initiatives to understand the most appropriate monitoring and verification process. Review the project savings at pre-defined regular intervals and report outcomes to senior management/City Council.

#### **Bill Verification and Rate Optimization**

A consistent, periodic review of the City's energy invoices is important to ensure that rates and recorded consumption values on energy bills is accurate. This ensures that the invoices presented by utilities are correct and are providing appropriate and relevant data to the City's Energy Management Platforms.

**Actions:** Perform a rationalization check on monthly invoices and conduct at least annual detailed billing reviews to ensure accuracy.

#### **Ongoing Ontario Regulation 507/18 Reporting**

In addition to completing this Plan, the City of Temiskaming Shores is required to submit annual energy consumption and greenhouse gas emissions templates to the appropriate Ministry of Energy portal. Gathering and recording monthly energy invoices are necessary to complete these reports.

**Actions:** Complete all required regulatory reporting by July 1 of each year.