2014

Energy Conservation and Demand Management Plan

Dymond
Haileybury
New Liskeard

City of • Ville de
Temiskaming Shores

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6/4/2014

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Background

The City recognizes the importance of a sustainable approach to energy; therefore, commits to improve energy efficiency, reduce energy consumption, and foster a green energy environment.

To achieve these principles and to build an energy efficient and sustainable community, the City has developed a five (5) year Conservation & Demand Energy Management (CDM) Plan as well as an Official Plan for the promotion of sustainable and energy efficient development. The future development of a Municipal Energy Plan will also compliment the above-mentioned plans, by building on and creating awareness of energy use, efficiency and conservation principles; building partnerships and promoting engagement with local energy stakeholders within the City; identifying energy conservation opportunities and supply/power constraints that may limit development, and then developing long-term strategies to implement those opportunities.

Purpose

Canadians are concerned about climate change. Public opinion polls demonstrate that taxpayers across Canada consistently rank the environment as one of the most pressing issues facing our citizens and our government;[1] therefore, municipal governments have an important contribution towards climate protection. In fact, up to half of Canada's greenhouse gas (GHG) emissions are under the direction or indirect control or influence of municipal governments.[2] Ontario municipalities also consume more than 6.6 billion kilowatt hours (kWh), at a cost of $680 million annually, representing 4.3 percent of Ontario's total electricity consumption.[3]

Provincial Act & Regulations

The Green Energy Act, 2009 (GEA) received Royal Assent on May 14, 2009. This Act is part of Ontario's plan to become a leading green economy in North America. A projected outcome of the GEA is to create the potential for savings of energy expenditures through a series of conservation measures. The GEA also focuses on Ontario's Long Term Energy Plan with a target of reducing consumption within Ontario by 7,100 MW by 2030. Half of the target would come from the commercial sector, which includes municipal buildings in the broader public sector.[4]

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[1] "Losing Ground: Canada's Cities and Communities at the Tipping Point". FCM - Federation of Canadian Municipalities. October 12, 2007. Web. May 20, 2014. <http://www.municipaldata-donneesmunicipales.ca/Site/Monitoring/Files/C-Reporting/C2-Thematic%20reports/Theme_Report_5/Useful%20Documents%20for%20the%202008%20Immigration%20Theme%20Report%20Working%20Group/tippingpoint.pdf>.

2 "About Climate Change". FCM - Federation of Canadian Municipalities. October 3, 2013. Web. May 20, 2014. <http://www.fcm.ca/home/programs/partners-for-climate-protection/about-climate-change.htm>.

[3] "Ontario Municipalities: An Electricity Profile". Power Application Group Inc. (PAGI). January 25, 2008. Web. May 20, 2014. <https://www.ieso.ca/imoweb/pubs/sector-specific_research/Ontario_Municipalities-An_Electricity_Profile.pdf>

[4] "Energy Conservation Plans for Public Agencies: Proposed Regulation". Environmental Registry – Government of Ontario. May 17, 2011. Web. May 21, 2014. <http://www.ebr.gov.on.ca/ERS-WEB-External/displaynoticecontent.do?noticeId=MTEzMjQ1&statusId=MTY5NzQ2>

The Ministry of Energy has passed a regulation under the Green Energy Act, 2009 that requires Ontario's public agencies (municipalities, universities, colleges, schools and hospitals) to demonstrate the leadership role government plays in energy conservation by developing and implementing energy conservation plans. The regulation provides the Ontario government and public agencies with valuable information on how energy is used within each sector, allowing organizations to benchmark their facilities to similar facilities.[5]

In August 2011, the Province of Ontario enacted Ontario Regulation 397/11, under the Green Energy Act 2009. The regulation requires public agencies, such as municipalities, to report on energy consumption and greenhouse gas (GHG) emissions annually beginning in 2013, and to develop and implement energy Conservation and Demand Management (CDM) plans in 2014.

Section 6 of the Green Energy Act mandates the CDM plan to include a:

1. Summary of annual energy consumption for each of the public agency's operations;
2. Description and forecast of results of all conservation and demand management (CDM) activities;
3. Summary of progress made; and
4. Additional information as may be prescribed.[6]

The regulation is to be completed in the following stages:

1. Phase 1 requires the completion of a summary template detailing each building's energy consumption, size, age, and use of the facility. The first report was due July 1, 2013 using 2011 data.
2. Phase 2 of the regulation details the development of energy conservation plans which includes a high level description of how the organization would conserve energy and reduce demand over the life of the plan, as well as a forecast of the expected results. The plans are to cover a five year period, be approved by Council with public posting on the municipality's website, and are due by July 1, 2014.

The implementation of the CDM plan will fulfill the City's reporting requirements under this regulation.

The City will also develop and implement a comprehensive Municipal Energy Plan as a compliment to the CDM and to the Official Plan, by building on and creating awareness of energy use, efficiency and conservation principles; as well as build partnerships and promote engagement with local energy stakeholders within the City, while identifying energy conservation opportunities and supply/power constraints that may limit development.

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[5] "Conservation for Public Agencies". Ministry of Energy. March 12, 2014. Web. May 21, 2014. <http://www.energy.gov.on.ca/en/green-energy-act/conservation-for-public-agencies/#.U3TvfU1OX4g>

[6] "Green Energy Act, 2009". Service Ontario e-Laws. May 21, 2014. Web. May 21, 2014 < www.e-laws.gov.on.ca/html/source/statutes/english/2009/elaws_src_s09012_e.htm>

Vision

The City will continue to reduce energy consumption and costs through the wise use of energy. This will involve education, awareness and an understanding of energy management within the City.

The City's vision:
"To create a culture of conservation and to continually reduce energy consumption and the associated carbon footprint through the efficient use of resources and energy, while maintaining an efficient and effective level of service for the general public."

This vision can be achieved through the integration of energy efficient facilities infrastructure, and operational efficiencies, as well as building a culture of energy awareness and knowledge.

Everyone has role to play in the use of energy within City facilities and operations. Council and senior administration will demonstrate the leadership and commitment required to ensure the fulfillment of the CDM by all energy consumers.

Strategic Objectives

To achieve the Vision as described above, there are a number of goals and objectives that align with the CDM plan's development and implementation.

The following are the CDM's strategic objectives:

- To create a culture of conservation within the City facilities and operations to reduce greenhouse gas emissions and to ensure the wise use of resources.
- To promote the sustainable use of resources through:
    - Energy Conservation;
    - Energy Efficiency; and
    - Renewable Energy.
- To reduce energy operating costs through implementation of best practices and technology.
- To maximize fiscal resources through direct and indirect energy savings.
- Demonstrate sound operating and maintenance practices to reduce the environmental impact of the City's operations.
- To improve the reliability of equipment and to reduce maintenance.
- Provide a forum for discussion within the City on energy management to be able to explore new ideas and trends.

With the development of the CDM, all departments will have a tool to ensure energy management is a consideration with all decisions with respect to operations and facilities.

The incorporation of facility standards/processes, infrastructure improvements and staff awareness is important towards the reduction of GHG emissions.

Energy Sources

The City is committed to the reduction of total energy use within City facilities and operations. The majority of key initiatives are directed towards the reduction of GHG emissions for electricity and natural gas, as these two sources comprise the largest quantity of energy used in the City. The remaining energy uses are from fuel sources including diesel, gasoline and propane.

The alignment of existing strategies such as in the Official Plan and the action items outlined in the CDM, will provide guiding directives to reduce greenhouse gas emissions within corporate facilities and in the fleet portfolio.

Energy Committee

The Energy Management Team will meet quarterly with a mandate to ensure that the CDM Plan remains a priority within the City's facilities and operations. The City will identify staff members and personnel from our critical service providers who carry significant responsibility for energy performance or who can make essential input to energy management processes.

The Energy Management Team's objectives will be:

- To develop strategies within operations to work towards reducing energy consumption;
- To integrate best practices into daily operations (where feasible) to reduce energy consumption;
- To provide a forum for discussion on energy management strategies that may benefit all Departments; and
- To Increase awareness of the consumption of energy within each Department.

Strategic Direction

The City has undertaken many initiatives to improve the environmental health of the community. The City has adopted a number of strategic initiatives as summarized below. These initiatives demonstrate a commitment to a greener community, as well as align with the development of the CDM.

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

Table No. 1 – Existing Energy Policies

Current Energy Assessment

It is the responsibility of the Manager of Physical Assets to monitor and manage energy bills on a monthly basis. The types of energy used in the operation of City facilities and delivery of services include:

- Electricity is supplied by Hydro One and is priced at the standard rates offered by the provider.
- Natural Gas is supplied by Union Gas and is priced at the standard rates offered by the provider at the time.
- Propane is supplied by Superior Propane and is priced at the standard rate offered by the provider at the time of delivery.

- Vehicle fuel (gasoline & diesel) is supplied by Grant Fuels and is priced at the standard rate offered by the retailer at the time.

Baseline Energy Data

Managing energy requires implementing appropriate energy monitoring procedures. The establishment of an energy baseline is essential in this process. The baseline will assist 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 relies on utility bills to establish its energy baseline.

The City first completed an energy consumption inventory in 2011. This took into account the electricity and natural gas consumption of City facilities, street lights/traffic lights, parks and marinas. In 2011, the City's total energy use consisted of 7,936,787kwh of electricity and 516,974 m3 of natural gas, and the combined total costs of electricity and natural gas was $1,409,626 (including HST).

Due to the increasing cost of energy commodities, it is important that the City reduces its energy consumption. Savings achieved through energy consumption reduction can be utilized for the continued growth of the City`s portfolio of facilities.

The table below outlines a comparison in annual consumption and the associated costs between 2011 & 2012:

Category	2011		2012		Variance (KWH)	% Variance (KWH)
	Cost ($)	KWH	Cost ($)	KWH		
Water/ Wastewater/ Pumps	$623,303	3,662,542	$717,649	3,455,099	(207,443)	-5.7%
Street Lighting & Traffic Lights	$218,971	1,541,830	$229,623	1,552,867	11,037	0.7%
Arenas	$145,397	1,045,425	$221,703	1,282,111	236,686	22.6%
Pool & Fitness Centre	$59,009	443,355	$70,603	500,846	57,491	13.0%
Other Facilities	$38,241	223,696	$39,250	214,445	(9,251)	-4.1%
City Hall	$34,118	252,094	$34,401	249,548	(2,546)	-1.0%
Medical Centres	$32,483	232,689	$31,685	213,117	(19,572)	-8.4%
Public Works	$32,136	218,452	$32,187	194,774	(23,678)	-10.8%
Parks/ Tennis Court	$20,943	129,790	$23,131	131,354	1,564	1.2%
Marinas	$18,621	117,203	$15,051	101,685	(15,518)	-13.2%
Libraries	$10,485	69,711	$10,818	69,551	(160)	-0.2%
Total Electrical Consumption/Cost	**$1,233,707.00**	**7,936,787.00**	**$1,426,101**	**7,965,397**	**28,610**	**0.4%**

Table No. 2 – 2011 & 2012 Electricity Comparison

Category	2011		2012		Variance (M3)	% Variance (M3)
	$$	M3	$$	M3		
Water/ Wastewater/ Pumps	$7,775	13,957	$7,614	12,219	(1,738)	-12.5%
Street Lighting & Traffic Lights	-	-	-	-	-	-
Arenas	$51,826	165,555	$57,267	137,153	(28,402)	-17.2%
Pool & Fitness Centre	$39,857	132,822	$57,290	155,358	22,536	17.0%
Other Facilities	$34,524	91,002	$41,058	92,420	1,418	1.6%
City Hall	$10,590.24	29,040	$9,874	22,878	(6,162)	-21.2%
Medical Centres	$3,733	9,670	$3,415	7,482	(2,188)	-22.6%
Public Works	$19,748	54,390	$36,407	88,517	34,127	62.7%
Parks/ Tennis Court	-	-	-	-	-	-
Marinas	-	-	-	-	-	-
Libraries	$7,866	20,538	$9,292	20,872	334	1.6%
Total Natural Gas Consumption/Cost	**$175,919.24**	**516,974.00**	**$222,218**	**536,900**	**(19,926)**	**3.9%**

Table No. 3 – 2011 & 2012 Natural Gas Comparison

Other	2011	2012	$ Variance	% Variance
Propane (Heating Fuel)	$1,705	$2,319	614	36.0%
Gasoline/Diesel/ Propane (Vehicles)	$313,131	$347,323	34,192	10.9%

Table No. 4 – 2011 & 2012 Other Fuel Comparison

Factors that influence Energy Consumption

Special events, such as those listed below, may influence the City's energy consumption:

- Anticipated increase/decrease in building occupancy
- Unusual weather (i.e. mild winter, hot and humid summers)
- Closing of a facility/ site
- An increase/decrease in unit energy cost by a supplier
- Addition of new facilities

Actions

The development of the CDM is intended to provide guidance for future energy projects, as well as intended to be a living document to build the foundation for successful energy management; such as the development of policies, procedures, processes and energy management knowledge.

Current and future initiatives will be selected using the following process:

1. Gap analysis
2. Alignment with City strategic directions, plans, goals and objectives.
3. Opportunities identified through analysis of baseline consumption data
4. SMART (Specific, Measureable, Accountable, Realistic and Time bound) goals.

The key initiatives that are being proposed fall within three main categories:

Key Initiative Category	Key Initiative Description	Examples	Expected Annual Consumption Savings
Process Improvements	Improvements or alternatives to current process based operations that are quicker and more straightforward with lower costs	Energy tracking, Bill verification, Procurement standards	1% to 2%
Program Implementation	Improvements that take longer to implement with moderate costs	Energy awareness program, Lighting upgrades	2% to 5%
Projects	Capital projects to upgrade equipment and facilities and are typically more expensive to implement with detailed planning required	Retro/ Commissioning of facilities, Energy efficiency, equipment replacements	Project dependant

Table No. 5 – Key Initiatives

Once the initiatives are classified into a key initiative category; i.e. process improvement, program implementation or projects, the initiative is then aligned with one of the five focus areas of a successful energy management strategy, as described below:

1. **Energy Data Management**: Evaluate all elements within an organization with regard to energy usage data. This includes evaluating monthly bills, establishing key performance indicators, load profiles, interval data, and benchmarking.

2. **Energy Supply Management**: Investigate an organization's exposure to the energy market and suppliers; monitor changes, and account management with the utility. Proper energy procurement includes: rate optimization, utility account

management, supplier choice and evaluation, supply reliability and quality, demand/supply optimization and risk management.

3. **Energy Use in Facilities**: Evaluate the equipment and operations within facilities to investigate potential areas of energy efficiency opportunities including tools such as facility walk-throughs, benchmarking, comprehensive audits, review of current operating processes, and monitoring and trending of equipment and systems.

4. **Equipment Efficiency:** Reduce the consumption of energy without sacrificing the services provided. This includes preventative maintenance, system controls, retrofits, system upgrades and investigation into new and emerging technology.

5. **Organizational Integration**: Include staff throughout the organization in the planning and implementation of the CDM. The roles and expectations of the program need to be clearly defined, and requires promotion on a regular basis. All City employees need to be updated on the programs actions and results.

Each initiative and strategy is categorized as to the nature of the energy management activity, to align with one of the five focus areas, corresponding to one of the three key initiative categories, as outlined on the performance score card below:

Level	Energy Data Management	Energy Supply Management	Energy Use in Facilities	Equipment Efficiency	Organizational Integration
Process Improvements	- Energy Tracking - Bill Optimization - Bill Verification	- n/a	- Facility Standards	- System Controls - Energy Efficient Procurement - Fleet Procurement	- Awareness & Participation - Incentive Awareness
Program Implementation	- n/a	- Supply Management	- Operating Procedures - Customer Awareness	- Lighting Upgrades	- Performance & Training - Resource Management
Projects	- n/a	- Demand Side Optimization - Risk Management	- Energy Audits - Commissioning and Re-commissioning	- System Upgrades - Standards - Equipment & Building Operational Improvements - New and Emerging Technology - Asset Renewal Program - Preventative Maintenance	- Energy Management Training

Table No. 6 – Performance Scorecard

The highest priority will focus on building corporate awareness and policy development with the intent to improve energy knowledge within the City. This will build an internal capacity for energy management and will provide staff with the tools to incorporate effective and efficient energy management decisions into daily operations.

Over the next five years, the Energy Committee, under the guidance of the Manager of Physical Assets, will work to develop the actions and objectives outlined below within the five focus areas.

Process Improvements

Focus Area	Action	Objective	Performance Measures
Energy Data Management	Energy Tracking	Data allows for improved budgeting, goal setting, conservation programs and project development, monitoring and verification, and awareness campaigns.	Creation of an energy management database.
	Bill Optimization	Identify billing anomalies, costs that can be controlled and where the utility can improve rate structure.	Identification of billing costs that can be controlled; i.e. gas-transportation, Electrical – peak demand. Identifying where the utility can help and identifying anomalies in consumption
	Bill Verification	Ensure correct billing, inaccurate bills will be identified and addressed.	Inaccurate bills are identified and addressed.
		Improve understanding and accuracy of energy consumption and costs.	Improved energy consumption and billing accuracy.
Energy Use in Facilities	Facility Standards	To develop operational standards for building controls within facilities	Standard developed for building operations; i.e. turning off electronic devices during off-hours (coffee makers, computers, printers, calculators, etc.
Equipment Efficiencies	System Controls	To develop a process to control equipment and systems when operating levels or loads are reduced, to reduce energy use.	Process developed with energy management as a critical component; i.e. vacuum back of all vending machines in municipal facilities and identify unnecessary plug loads.
	Energy Efficient Procurement	To develop policy for standards for the purchase of energy efficient	Policy developed that requires and/or encourages the

		equipment; i.e. Energy Star	purchase of energy efficient equipment for new or replacement equipment, where feasible.
	Fleet Procurement	To develop policy for standards for the procurement of fuel efficient vehicles.	Selecting vehicles/ equipment with engines with better fuel economy, as well as selecting the right size for the work, where they are commercially available and meet operational needs.

Organizational Integration	Awareness and Participation	To develop a Energy Awareness Program to build internal capacity allowing Departments to make informed energy management decisions, and develop a contact list outlining Energy Committee Members.	Development of awareness campaign and associated educational tools.
	Incentive Awareness	To develop a process to ensure all departments are aware of the available energy incentives that can be leveraged in planning energy management initiatives.	Incentives applied for and success in application approvals.

Table No. 7 – Process Improvements

Program Implementation

Focus Area	Action	Objective	Performance Measures
Energy Supply Management	Supply Management	To establish communication protocols with Departments responsible for using energy, to facilitate an understanding of the energy purchased and used.	Development of awareness campaign
Energy Use in Facilities	Operating Procedures	To establish written operating procedures to control equipment systems operations to optimize energy efficiency and eliminate waste energy	Documented operating procedures outlining energy efficiencies
	Customer Awareness	To develop a program to increase energy conservation awareness for users of City facilities.	Development of awareness campaign for external customers using City facilities.
Equipment Efficiencies	Lighting Upgrades	To develop standards to lighting system upgrades (internal and external), such as motion sensors, with consideration for appropriate lighting levels and usage, while maintaining safe and secure light-levels.	Development of lighting standards (internal and external) for City facilities.
Organizational Integration	Performance & Training	To develop strategy to incorporate energy management into the accountability of the employee through orientations, visuals, etc.	Strategy development to incorporate energy management accountability into daily responsibilities of staff. Staff awareness of responsibilities through energy management awareness training.
	Resource Management	To develop policy to build in energy management into the requirements of all	Implementation of policies and processes to ensure energy

		external service providers.	management considerations are communicated and implemented as required by external service providers.

Table No. 8 – Program Implementation

Projects

Focus Area	Action	Objective	Performance Measures
Energy Supply Management	Demand Side Optimization	To investigate opportunities to match demand size load shifting to optimize cost.	Implementation of suitable demand management programs.
	Risk Management	Establish an evaluation to measure the success of the purchasing policy.	Successful and cost effective procurement of commodities.
Energy Use in Facilities	Energy Audits	To develop criteria to determine future years facilities scheduled for audits	Documented operating procedures outlining energy efficiencies.
	Commissioning and Re-Commissioning	To develop testing to verify that systems and equipment perform to specifications.	Implementation of commissioning and re-commissioning guidelines to ensure facility operates to specifications during initial installation and after retrofits.
Equipment Efficiencies	System Upgrades	To develop standards to lighting system upgrades (internal and external), with consideration for appropriate lighting levels and usage.	Development of lighting standards (internal and external) for City facilities.
	Standards	Develop policy for energy efficient guidelines and equipment specifications for major renovations and new construction projects	Energy efficient guidelines and sustainable design principles and specifications are ingrained within all major renovation and new construction projects

	Equipment and Building Operational Improvements	To undertake equipment and building operations retrofits and improvements so energy efficiency is taken into account.	Develop awareness campaign to continue to reinforce energy efficiencies and the elimination of waste energy within daily operational decisions. Develop building system standards, as required, within all City facilities. Develop window replacement program and maintenance; i.e. window sealing, caulking, weather-stripping, etc.
	New and Emerging Technology	Consider new technologies and industry trends, such as LED lighting for street lights and traffic lights.	Implement applicable new and emerging technology to increase energy efficiency and eliminate waste energy.
	Asset Management Program	To develop a strategy and sustainable funding model to ensure energy efficiency is incorporated within the asset renewal program.	Continued sustainable funding to implement asset management program to ensure energy management is a priority.
	Preventative Maintenance	To develop a preventative maintenance routine to include a schedule for routine maintenance and inspection.	Integrate strategy to keep assets performing efficiently to save energy and extend equipment life.
Organizational Integration	Energy Management Training	To incorporate energy management training into employee orientation and future training opportunities.	Energy management training opportunities are integrated into City training courses.

Table No. 9 – Projects

Understanding the need to build internal energy management awareness and capacity, is a priority of the CDM, and will emphasise the importance of implementing the remaining focus areas into the daily operational processes and into future projects.

Measures of Success

The measures of success will be based on a number of key performance indicators (KPI's) including:

- Reduction of energy consumption from 2011 baseline data.
- Integrating energy management into daily operation processes and facility based infrastructure decisions.
- Energy efficiency projects included into capital asset management decisions.
- Increased capacity building and awareness regarding energy management within the Corporation.
- Project-specific performance indicators dependent on the project.

Reduction Targets

To align with the proposed initiatives outlined in the CDM, it is proposed that the targets also align with the initiatives that will be undertaken. The implementation of Process Improvements and Program Implementation initiatives, will build the foundation for successful energy management practices along with developing the capacity and awareness within the City, which will contribute towards a 1-5% savings in consumption or consumption avoidance per year. Consumption savings attributed to the Projects undertaken will be project dependent.

Financial Assessment

The City's 2011 budget for energy expenditures including electricity, natural gas, diesel, gasoline, and propane was $1,459,500 (net of rebated HST).

To improve the monitoring of energy consumption, the charts below highlight where the City was consuming the most energy in 2011, with respect to Hydro Electric and Natural Gas.

Table No. 10 - Electricity Consumption: 2011

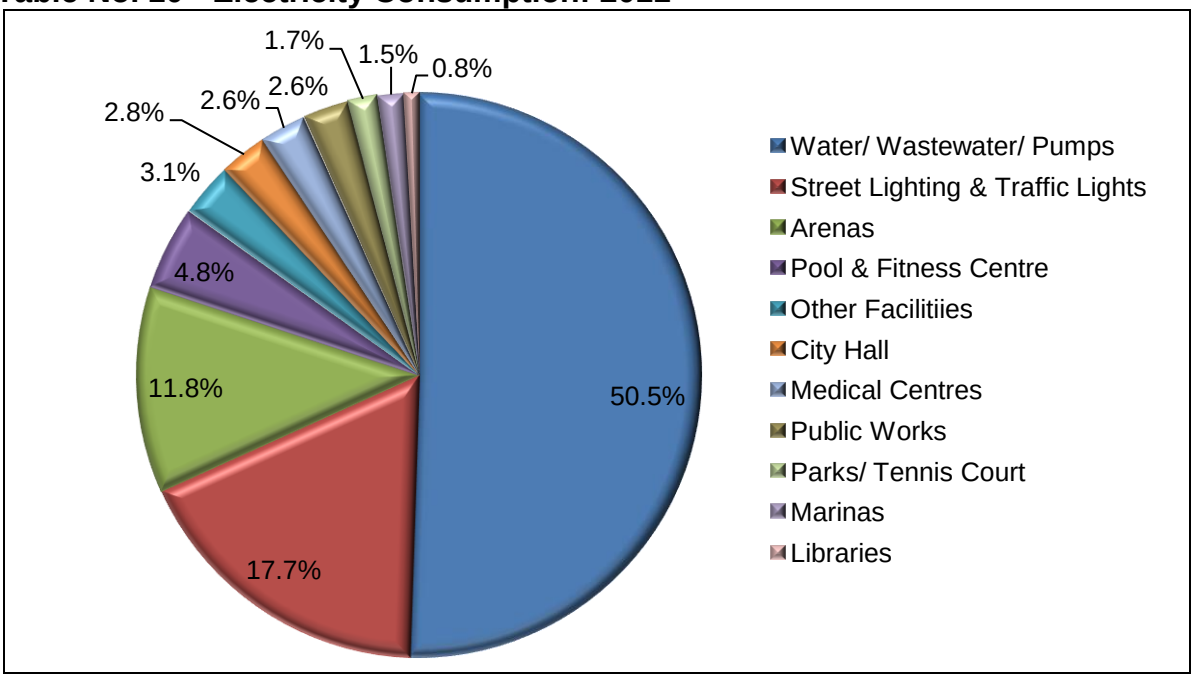
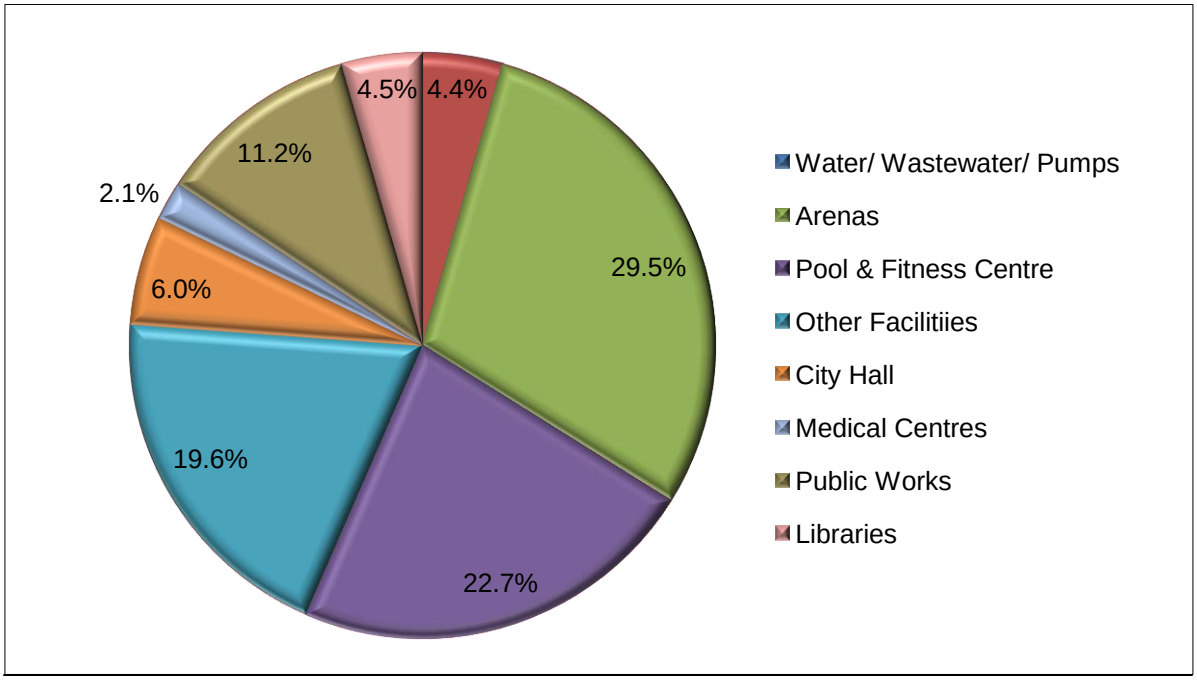


Table No. 11 - Natural Gas Consumption: 2011



Energy costs are controllable and can lead to additional savings once the culture of energy efficiency and the wise use of energy have been integrated. The proposed process improvements, program implementation and project initiatives can all lead to individual savings, but as a whole, a more efficient process, facility and/or operation can lead to accumulated sustainable savings, not only in consumption and GHG emissions,

but also cost savings or avoidance. It is anticipated over the next twenty years that the consumer rate of electricity will increase by 3.5% annually, and the industrial rate will increase by about 2.7 per cent annually[7]. This increase can be mitigated through consumption savings that can be achieved through the initiatives outlined within the CDM.

In addition, energy efficiency upgrades and new projects as part of the capital and operating budgets will continue to be brought to Council for approval within the designated budget year. As the cost of energy is expected to increase, allocations toward energy efficiency are also required to help reduce the impact of these increases through energy reduction activities.

Incentive Funding

To ensure the City can take advantage of funding and grant opportunities related to energy efficient programs and projects, the City will liaise with representatives from local utility providers. Staff and utility representatives are in a unique position to review current and future process improvements, program implementations and projects that can meet funding requirements. This working relationship may assist in determining the potential for customized programs that may not fall into the existing prescribed funding models for municipalities.

Energy Successes & Current Initiatives

It is essential to build upon successes that the City has already achieved to move forward with the CDM. The City aims to provide a framework for promoting the use of sustainable features in aspects of development; for example, during construction of City Hall, the building was orientated to optimize the sun's capacity, and large windows were installed for sunlight penetration into the lobby, meeting rooms and offices. Other energy conservation features included some occupancy lighting sensors to avoid unnecessary energy consumption when rooms are not in use. The City has also implemented by-laws/ policies to promote energy conservation (Table No. 1 – Existing Energy Policies).

In 2013, the City completed energy efficient lighting upgrades at the New Liskeard Arena and at the Haileybury Water Treatment Plant; the HVAC replacement at the Riverside Place Hall; the HVAC replacement at the Dymond Community Hall; and the heating and lighting upgrades at the New Liskeard Water Treatment Plant and at the New Liskeard Pubic Works Building.

Three conservation initiatives the City are currently working on, are the review of a Street Lighting Proposal for the replacement of existing street lights with LED lights, and the completion of energy audits for three water or sewer facilities (Haileybury Sewage Treatment Plant; Haileybury Water Treatment Plant & the New Liskeard Water

[7] "Ontario's Long-Term Energy Plan: p 4, 58.". Ministry of Energy. March 25, 2014. Web. May 22, 2014. <http://www.energy.gov.on.ca/docs/en/MEI_LTEP_en.pdf>.

Treatment Plant). The energy audits are in the process of finalization, and the Ontario Power Authority (OPA) and Hydro One approved funding for the detailed design aspects. Energy audits are also complete for the Pool Fitness Center, the New Liskeard Arena, and the Haileybury Medical Clinic; the City is currently reviewing the audits findings.

Reducing energy consumption within the City also includes eliminating or shortening trips by motor vehicles by promoting walking, bicycling and the use of public transit. Small communities rely more heavily on personal vehicles than large urban centers, due to population density. The City partnered with the South Temiskaming Active Travel Organization (STATO) trail, to create a route for non-motorized use from New Liskeard to Haileybury. The City has also upgraded transit buses, updated the route, increased hours of operation and extended the service to seven days per week.

All the listed projects are intended to reduce the City's GHG footprint.

Monitoring, Verification and Reporting

As part of the energy management strategy, continuous monitoring, verification and reporting are essential to track consumption and dollar savings and/or avoidance which result from the implemented initiatives.

The Energy Committee is responsible for providing an annual progress update. As part of the CDM, the implemented processes improvements, program implementation and projects will be documented and reviewed to update consumption savings. By regularly monitoring and reporting consumption and dollar savings and/or avoidance , 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 the Green Energy Act's to provide a high level description of how corporation's conserve energy and reduce demand over the life of the plan, as well as a forecast of the expected results.

Energy Mandate

As part of the City's commitment to reduce greenhouse gas emissions and fiscal accountability, it is essential that all staff play a part in the Energy Mandate. It will be the responsibility of the Manger of Physical Assets and the assistance of the Energy Committee, to ensure the energy management strategy and future awareness/training programs are actively communicated and implemented to all employees.

References

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