



Subject: Energy Conservation & Demand Management **Index Number:** RCP-001-19
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1. Introduction

According to the Ontario Regulation 397/11 made under the Green Energy Act, 2009, every public agency shall prepare, publish and make available to the public energy conservation and demand management plans. A summary of the agency's annual energy consumption and greenhouse gas (GHG) emissions for its operations is also required. Finally, a description of previous, current and proposed measures for conserving and otherwise reducing the amount of energy consumed by the agency's operations and for managing demand, including a forecast of expected results is requisite. This responsibility shifted and now falls within Electricity Act (Ontario Regulation 507/18).

The Township of Leeds and the Thousand Islands is a public agency and is therefore required to report its annual energy consumption and GHG emissions. Furthermore, the Township is also required to prepare a report stating goals for conserving and reducing energy and proposed conservation efforts. The Township is driven to improve the energy efficiency of facilities, especially in the face of rising fuel costs, energy security and environmental concerns. This plan has been developed to reduce energy by 10 per cent by 2024, using 2011 consumption data as a baseline.

The Township is responsible for energy and conservation management at the following facilities (please note that some facilities house multiple functions):

- Municipal Office
- Municipal Garage (Public Works) (2)
- Lansdowne Community Hall
- Seeley's Bay Community Hall
- Fire Stations and Training Centre (4)
- Landfill Buildings (2)
- Public Library (3)
- Municipal Archives (2)
- Park Facilities (3)
- Municipal Harbour
- Ivy Lea Dock
- Storage Buildings and other Auxiliary Facilities
- Rockport Customs House
- Water Treatment Facility
- Sewage Treatment Facility

Provided in this report are the projects, processes and programs that the Township will undertake to ensure its success in conservation demand management. These initiatives will remain in place for the duration of each facility's time in operation.



2. Commitment

2.1 Declaration of Commitment

The Council of the Township of Leeds and the Thousands is committed to providing quality programs and services while reducing energy consumption and mitigating costs through the wise use of energy.

As such the Township resolves to allocate the necessary resources, with prior Council approval, to reduce energy consumption and its related environmental impact. The commitment of the Township of Leeds and the Thousand Islands is to provide quality programs and services that are cost effective, environmentally responsible, innovative and respectful of the natural heritage. In keeping with the goal to remain environmentally responsible, all reasonable efforts will be taken to minimize impacts to the environment through ongoing waste diversion efforts, reduction of energy consumption and by focussing on sustainable planning, healthy communities and environmental stewardship.

2.2 Vision

The vision of the Township of Leeds and the Thousand Islands is to reduce total energy consumption through the efficient use of energy and resources, while still maintaining an appropriate level of service to our residents and visitors. This includes the total energy consumption of hydro, stove and furnace oil, and propane. The Township will continue to reduce energy consumption and mitigate costs through the wise use of energy. This will involve a collaborative effort to increase the education, awareness and understanding of energy management within the Corporation. Through the integration of energy efficient facility infrastructure, operational effectiveness, education of energy consumption and in increased awareness of energy issues, this vision will be achieved. It is highlighted that everyone within the organization has a role to play in decreasing energy consumption and that this is very much a team effort.

2.3 Goals

The primary goal is to improve the management of the Township's energy consumption. This will maximize fiscal resources through direct and indirect energy savings, reduce environmental impact of Township operations and provide leadership in the adoption of a culture of sustainability.

Part of this objective is setting a conservation target that will see the Township of Leeds and the Thousand Islands reduce its 2011 energy consumption by 10% in 2024.

2.4 Overall Target

The key to a successful long-term facility focussed energy conservation and demand management vision is a strong Energy Plan, with measurable and achievable targets.



These targets will be about one per cent (1%) reduction in energy per year, starting in the first audit year, 2011. The year 2011 was established as the Township's baseline from which energy reduction results will be measured.

The Energy Reduction Target will be applied across the board. This means larger energy users in the Township must achieve the same reduction on a percentage basis in relation to the 2011 baseline, but their overall contribution to energy, cost and emission reductions will be much larger overall.

Following these targets, we should expect to see the corresponding reductions in energy usage (from 2013):

- 5% by 2019
- 8% by 2021; and
- 10% by 2024.

3. Organization Understanding

3.1 Municipal Energy Situation

Energy consumption, cost and environmental impact is becoming increasingly important with both Council and Senior Management. Reducing consumption and environmental impact is within staff and Council control and the Township recognizes that this will be increasingly important as the cost per unit cannot be controlled. This information must be readily available to all staff and the public.

3.2 Renewable Energy Utilized or Planned

The Township currently relies on renewable energy sources to offset hydro at two locations (Municipal Office and Lansdowne Community Hall). The Township will continue to explore opportunities for renewable energy options as it reviews its asset management objectives.

3.3 Past Energy Initiatives

Over the last five years, the Township has:

- Replaced 30-year-old halogen lighting with new energy efficient fixtures at the Lansdowne Community Hall;
- New efficient lighting has been installed at both Centennial Park canteen and Kendrick's Park canteen facilities; and
- Entered into an agreement with a local HVAC service company for regular HVAC inspections and maintenance to ensure system optimization;
- Installed solar micro-fits at the Municipal Office and Lansdowne Community Hall;
- Piloting solar light standards as part the new cycle stations;
- Improved maintenance at municipal facilities to ensure peak operation of HVAC systems, window and door seals, lighting, etc;



- Installed LED street lighting across the municipality

As we look ahead, the Township endeavours to also address other items such as fleet and equipment maintenance in its efforts to reduce its consumption and lessen its impact on our environment.

4. Resources Planning

4.1 Energy Leader

The Director of Operations (or designate) will be the designated leader of energy planning and has been given the overall responsibility for energy management. In the case that the Township is without a Director, the Chief Administrative Officer will act as the Energy Leader.

4.2 Energy Team

At present the following people have been identified as members of the Energy Team: Roads Supervisor; Facility Maintenance; Treasurer; and Recreation Coordinator.

5. Projects Execution

5.1 Municipal Level

The Township of Leeds and the Thousand Islands will carry out the required development of business procedures, communications programs and implement them methodically according to the planned time lines within the resource constraints that apply. The administration and implementation of this plan will be the responsibility of the Energy Leader; however, since everyone uses energy in their daily activities, it will also be the responsibility of all Township staff to be aware of their energy use and work toward conservation. Through staff engagement and web based energy management tools, staff will be able to see the results of their efforts.

5.2 Asset Level

The Energy Leader will use department and facility representatives to support the implementation of facility level business procedures and communications initiatives. In order to build and sustain a corporate culture of conservation, staff *must* be engaged in affective awareness and education programs. Although facility management and maintenance staff/Energy Team have the lead responsibility in ensuring Municipal facilities operate efficiently, all Township staff should be familiar with and utilize energy efficient measures where possible. Staff will also be encouraged to submit ideas for consideration. In addition, any facilities requiring rehabilitation, replacement or renewal will incorporate energy saving strategies where possible.

6. Review

The Energy Leader along with their team will review and evaluate the Township's energy plan; revising and updating as necessary, on an annual basis. An annual



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progress report will be developed for Council and will correspond with the Township's annual energy reporting requirements. The report will include annual consumption, GHG Emissions and an update on all initiatives undertaken within the calendar year.

7. Evaluation Process

We will review and evaluate our Energy Plan, revising and updating as necessary on an annual basis following annual consumption reporting to the Ministry of the Environment.



8. Programs

Description	Facility	Contact	Date	Status
Energy Awareness	All facilities	Energy Leader	2020	Pending
Details	Add energy awareness to senior management meetings. Energy reports will be distributed to director and other senior managers; this will provide a platform to discuss topics such as: current cost of energy consumption, future implications of current usage, areas for improvements, methods for reduction of consumption, grants and other opportunities. Anticipated annual savings: 1-2%			
New Employee Orientation	All facilities	Energy Leader	2019	Active
Details	As part of orientation for new staff (full time, temporary, student and otherwise), an overview of energy conservation will be included with additional conservation demand management training will be provided as appropriate.			
Social Marketing	All facilities	Energy Team	2021	Pending
Details	Employing social marketing techniques (e.g. visual aids, incentives, etc) staff and visitors to municipal facilities will be made aware of the implications of current use patterns. Media and marketing tools will be employed to offer conservation options and reminders. For example, a simple poster or screen saver for staff, reminders posted near thermostats and light switches, quarterly posting of energy consumption reports or graphic depicting progress made toward energy conservation goals.			
Employee Engagement	All facilities	Energy Team	2019	Active
Details	Although the adoption of energy efficient technology usually forms the basis for energy conservation projects, there is a behavioural aspect to the energy conservation picture. The objective is to empower staff and provide them with the education required to adopt behavioural practices that will result in the more efficient facility use. invite and encourage staff from all departments to recommend ideas to reduce energy use both within their own building and department, but also invite staff to visit other facilities as this may bring to light wasteful practices of the regular inhabitants.			
Lunch and Learn	All facilities	Energy Team	2020	Pending
Details	Members of the Energy Management Team will host regular Lunch and Learns for staff and management to learn more about energy conservation, energy savings and available programs.			



9. Processes

Description	Facility	Contact	Date	Status
Life Cycle Costing	All facilities	Energy Leader	2019	Pending
Details	Life cycle cost analysis is a method for assessing the total cost of facility and/or equipment ownership. It takes into account all costs of acquiring, owning/maintaining/operating and disposal of a building or building system. The Township will include a "Green Procurement" policy when updating its purchasing by-law which should be viewed in the context of achieving value for money based on total life cycle costs.			
Building Inspections & Maintenance	All facilities	Energy Leader	2016	Ongoing
Details	Township facilities will be examined regularly from a maintenance perspective for energy loss (e.g. building envelopes, insulation on water tanks, window seals, etc). A report will be prepared and submitted to the appropriate facility manager, Energy Team leader and Senior staff for review. This will also lend to annual budgeting activities as the Township strives to reduce its energy consumption.			
Appliance Usage	All facilities	Energy Team	2019	Pending
Details	Turn off all electronic devices that drain power such as coffee makers, printers, calculators, phone chargers at night and on weekends. Many of these items drain power even when they are not in use. Where possible power bars will be put into place and be used to turn devices off at night. This type of reduction can result in as much as a ten per cent saving in electricity use.			
Ongoing Training	All facilities	Energy Team	2020	Pending
Details	Staff will continue training and may collaborate with other neighbouring municipalities to identify trends, ideas and opportunities. This may also include joining an energy organization or network.			
Facility Rentals Rent Increase	All facilities	Energy Leader	2020	Pending
Details	The Township will review its annual energy costs and may raise the facility rental fees to offset rising energy costs. Energy conservation ideas and practices will be included in new facility rental packages.			



10. Projects

Description	Facility	Contact	Date	Status
Employ Set Backs or Programmable Thermostats	All facilities	Energy Team	2017	Ongoing
Details	Several of the Township's facilities make use of programmable thermostats. These should be reviewed semi-annually so that temperature is adjusted to current use patterns. Programmable thermostats should be installed where appropriate. Where it doesn't make economic sense to install a programmable thermostat a setback of 0.5C should be used and may result on a 2% saving on heat. *Seeley's Bay Hall completed			
Community Hall Renovations	Lansdowne Community Hall	Energy Team	2019 and beyond	Pending
Details	Major renovations are planned for the Lansdowne Community Hall to improve programming, facility access and to create a new centre within the community. This renovation will allow for the installation of equipment and tools that will result in reduced energy demand. This will include: occupancy sensors, efficient lighting fixtures, HVAC, etc.			
Facility Upgrades	All facilities	Energy Leader	2019	Ongoing
Details	Where possible, each facility will receive upgrades that will help the Township meet its reduction targets. This will include envelop enhancements, HVAC upgrades, improved lighting systems, etc. These will come online as existing component meet their life cycle end and will be addressed on a priority basis.			
RFI Solar Energy	All facilities	Energy Leader	2014	Complete
Details	Council has authorized staff to issue an RFI for solar energy. Results will be reviewed and a report will be generated and sent to Council in 2015 for their consideration. Two Solar systems installed.			