



Administrative Report

Office of the Director of Infrastructure Services

To: Warden McNamara and Members of County Council

**From: Jane Mustac, P. Eng.
Director of Infrastructure Services/County Engineer**

Date: Wednesday, July 17, 2019

Subject: Energy Demand Management Plan – 2019-2023

Report #: 2019-0717-IS-R020-JM

Purpose

The purpose of this report is to provide County Council with an updated Energy Demand Management Plan 2019-2023 in accordance with Ontario Regulation 507/18.

Background

On January 1, 2019 a new regulation was introduced under the Electricity Act, 1998 titled O. Reg. 507/18: Broader Public Sector: Reporting and Conservation and Demand Management Plans. This regulation replaces Ontario Regulation 397/11 titled Energy Conservation and Demand Management Plans was enacted under the now repealed Green Energy Act, 2009. The requirements for broader public sector energy planning and reporting by Ontario agencies are identical to those under the former Regulation 397/11. This regulation requires municipalities to report to the Ontario Ministry of Energy, Northern Development and Mines (MOENDM) the energy usage and greenhouse gas emissions of their facilities and provide an updated Energy Conservation and Demand Management Plan by July 1st, 2019.

The requirements direct all public agencies in Ontario to prepare, publicly report, and implement Energy and Conservation Demand Management plans by completing an update to the original 2014 Plan.

The County of Essex developed and submitted an initial Energy and Conservation Demand Management Plan to the Ministry of Energy on July 1, 2014. The initial plan provided high level direction for the County, while this Plan Update provides specific program components that position the corporation as a leader in implementing concrete actions that significantly reduce emissions.

Discussion

The five (5) year Energy and Conservation Demand Management plan is designed to guide the County of Essex towards a more energy efficient future. The policies, practices and conservation measures address only energy and GHG emissions from the municipality's operations, and do not include emissions at the community level.

Following the path of the previous plan, this master plan is a continuation of a process involving the:

- Integration of establishing and evaluating a baseline for performance;
- 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, monitoring and communication of results.

The County of Essex values the notion of efficient operations and creating more sustainable operations and the document identifies several strategic actions to achieve specific goals and targets with regards to energy management. Renewed objectives include:

- Reduce energy consumption in County facilities by 5% by 2024 compared to the base year of 2013;
- Enhance the culture of conservation through training and outreach to staff, clients and business partners;
- Enhancing key business practices to consider energy efficient standards;

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- Expand energy monitoring and tracking system to support facility/management decision-makings; and
- Deliver energy cost-savings through the identification and implementation of process, programs and projects that have the ability to reduce energy consumption.

Energy Consumption Baseline

To evaluate the effectiveness of the previous plan, the year 2013 was chosen as the base year for measurement; this aligns with the Ministry of Energy's requirement for reporting. Creating a baseline illustrates the impact that temperature and weather fluctuations have in determining the true net impact of energy conservation measures.

Overall, the County's consumption in 2013 was 5.3 million kWh of electricity and 809,000 m³ of natural gas. This usage equates to spending \$771,000 for electricity and \$219,000 for natural gas for the year (2013).

The implementation of proposed energy conservation measures throughout County owned assets will continue to promote successful practices to achieve reduction targets.

Energy Conservation Project Successes

Since the creation of the last plan, the County has invested in several energy efficient projects including, but not limited to, the following:

- Complete replacement of the Civic Centre building envelope (new energy efficient glass and facility cladding materials);
- New heating/cooling automation controls (BAS – building automation system);
- Replacement and upgrade of washroom facilities with water conservation controls;
- Replacement of four (4) HVAC units, including the addition of heating coils and electronic dampers;
- Replacement of 16 HVAC units and controls at Sun Parlor Home;
- Replacement of central hot water systems at Sun Parlor Home; and
- LED lighting in EMS facilities, at the Sun Parlor Home, throughout roadway infrastructure and in newly renovated areas of Civic Centre and parking lot.

Next Steps

To achieve the objectives of the plan, strategic actions are included to ensure a positive outcome over the next five (5) years. The plan also contains baseline information about current energy conservation and the role of the organizational teams that will be designated to work toward attaining these goals.

Strategic actions towards meeting the goals of the Energy Demand Management Plan need to be established annually through the budget process. Efforts to implement effective energy reduction strategies, managing energy retrofits, monitoring and tracking the County's energy usage and introducing energy awareness to staff and clients are the responsibility of Infrastructure Services and the Energy Team.

Annual energy consumption and greenhouse gas emission reporting is required to be submitted to the Ministry of Energy portal by July 1st of each year.

Financial Implications

A five (5) year capital and operating investment plan to support energy conservation will be developed through the budget process. The County of Essex will also take advantage of all funding and grant opportunities related to energy efficient projects.

Recommendation

That County Council receive the Energy Demand Management Report, supporting the continued development and implementation of energy reduction, conservation and awareness.

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Respectfully Submitted

Jane Mustac

Originally Signed by

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Concurred With,

Robert Maisonville

Originally Signed by

Robert Maisonville, Chief Administrative Officer

Appendix No.	Title of Appendix
A	County of Essex, 5-Year Corporate Energy Conservation and Demand Management Plan