



The Corporation of the Town of Tecumseh

Community & Recreation Services

To: Mayor and Members of Council

From: Paul Anthony, Director Community & Recreation Services

Date to Council: December 13, 2022

Report Number: CRS-2022-14

Subject: Town of Tecumseh Energy Management Update

Recommendations

It is recommended:

That Report CRS-2022-14, Town of Tecumseh Energy Management Update, **be received**;

And that the updated Energy Conservation and Demand Management (ECDM) Plan attached to Report CRS-2022-14 **be endorsed**.

Executive Summary

This report includes:

- i) Updates on the results and progress in implementing the Town's energy initiatives through the Energy Conservation and Demand Management (ECDM) Plan;
- ii) Recent acquisitions and developments in energy management efforts that have contributed to reduced energy demand and greenhouse gas (GHG) emissions;

- iii) Next steps with recommended series of actions, including seeking resources and partnerships to conduct a GHG reduction and energy management strategy, highlighting future initiatives and climate change considerations.

The noted components within this report present the outcomes of measures for conserving and reducing energy consumption for the Town of Tecumseh that includes data with results achieved and provides proposed considerations in furthering the Town's commitment.

Background

In 2014, Ontario's Green Energy Act (the Act) was created to expand renewable energy generation, encourage energy conservation and promote the creation of clean energy jobs. With the implementation of the Act, public agencies are required to report yearly on the total energy usage for all facilities that meet the necessary requirements. Energy reporting and conservation planning will help public agencies manage electricity usage and costs, identify energy savings opportunities, evaluate results by comparing similar facilities across the province, and measure improvement over time.

Public sector organizations are required to develop five (5) year Energy Conservation and Demand Management (ECDM) Plans that require subsequent updates on a five (5) year cycle.

The Town of Tecumseh's updated Energy Conservation and Demand Management (ECDM) Plan was developed in response to Ontario Regulation 507/18 which requires public sector organizations to complete an update to the original plans that had been initially adopted in 2014. The ECDM plan presents greenhouse gas (GHG) emissions from energy consumption and provides effective methods of identifying energy conservation opportunities to guide the Town towards a more energy-efficient future.

In response to the continued risks associated with GHG emissions and their profound effects on the environment, the Town declared a climate emergency in December of 2019 (RCM 390/19) for the purposes of framing and deepening the commitment to protecting the local economy, ecosystems and community from the effects of climate change.

The Town is firmly committed to reducing energy consumption and GHG emissions by seeking additional measures and targets that continue efforts to reduce emissions overall while gaining traction towards a net-zero target in the future.

Over the lifetime of the plan, the Town has been engaged in a variety of processes and activities to reduce energy consumption and adapt to climate change. These are detailed in Attachment 1.

The following outlines several notable projects that have occurred in 2022 that have contributed towards energy management:

- Replacement of ten (10) HVAC Units – Town Hall;
- Replacement of HVAC Units – Various Municipal Buildings;
- Replacement of Chiller and Brine Pump – Arena (Rink B);
- LED Lighting Conversion – Pool;
- Installation of four (4) Electrical Vehicles (EV) Charging Stations.

To conduct this update of the Town's ECDM, the following measures were undertaken:

- Development of an energy portal through Wattsworth Analysis Inc. to review and identify usage trends, and provide concise analysis of consumption while supporting data collection as required through the Ministry of Energy for annual reporting;
- Retained Dillion Consulting Limited to support this update to the Town's ECDM plan, including the following:
 - Completed a data consumption review;
 - Completed assessments pertaining to overall building envelope performance on identified municipal buildings to determine opportunities for cost savings and reduced consumption; and
 - Arranged and completed virtual workshops for the TecEnergy team and Senior Administration to facilitate discussions related to the Town's energy future.
- Initial engagement and discussion on potential collaboration and/or partnership with the University of Windsor through the Environmental Energy Institute.

Comments

Analysis – Energy Conservation and Demand Management (ECDM) Plan

While the Town estimates that it has met its modest conservation objectives from the 2014 plan, Administration recognizes that more can take place to ensure efficiencies and savings continue and that new conservation measures are identified and acted upon. Modest targets are set within the report for the Town to achieve over the next couple of years until the 2024 update is due.

The ECDM update report includes updated energy, GHG and water data from 2019-2021. Electricity, natural gas, diesel, gasoline consumption, and GHG emissions, by sector, are represented through charts and tables included in the report. Also noted within the report are shortcomings with the data and data anomalies caused during periods of closures and modified Town operations due to the pandemic (2020 and 2021).

The Town remains committed to maintaining energy management and conservation in the Broader Public Sector (BPS) while also committing to working with other organizations to better manage energy use across our community.

The following highlights our energy conservation objectives:

1. Improve the energy efficiency of the Corporation by utilizing best practices to reduce operating costs, energy consumption and GHG emissions;
2. Create a culture of conservation;
3. Improve awareness of GHG emissions and consumption behaviours; and,
4. Improve the efficiency of energy use through low-cost/no-cost opportunities.

Future energy initiatives have been categorized into four (4) groups:

- Overarching

The Town recognizes that, although energy projects are being implemented and savings are being realized, there is a need to develop a GHG reduction and energy management strategy through which activities can be effectively planned, budgeted, prioritized, initiated and monitored. This strategy will vastly assist the Town in mapping out strategic prioritization of initiatives moving forward by maximizing GHG reductions and optimizing costs to the Town. It is proposed that Administration works to secure resources and partnerships to initiate this strategy prior to the next ECDM plan update.

The remaining three (3) groups of energy initiatives are:

- Technical
- Organizational
- Behavioural

The ECDM Plan identifies several projects under these groups that will be pursued during the next two years to continue advancing the Town's progress in energy conservation and GHG reduction. As required, proposed projects will be brought to Council for approval during the annual operating and capital budget process. Where

possible, senior government funding will be sought to offset costs, although for the most part, projects are either already budgeted (such as the DMAF pump station project) or lower cost initiatives.

In addition, the TecEnergy Team will review the ECDM plan on an annual basis and determine adjustments to the plan as needed and coordinated efforts will be instituted across Town departments for tasks and projects identified in this plan. The next full review of the plan is scheduled for 2024.

Next Steps

The Energy Conservation and Demand Management (ECDM) Plan will continue to assist in identifying opportunities to make prudent investments in the future of the Town. Through an ongoing commitment to conservation and increased efficiency, along with subsequent updates to the ECDM Plan and the longer term GHG Reduction and Energy Management Strategy, the Town is well positioned to identify and implement new and/or emergent technologies and approaches needed to meet targets and aspirational goals as established.

Consultations

Public Works & Engineering Services
Development Services
Financial Services
Chief Administrative Officer

Financial Implications

Recommended and future initiatives are outlined in Attachment 1.

Initiatives proposed may require investments from each department that are incremental to current five (5) year capital budgets and/or operating budgets. Investments will be evaluated based on anticipated cost benefit results and Council authorization sought, as needed.

The GHG Reduction and Energy Management Strategy will be pursued through additional resources and partnerships in the next couple of years. As a plan evolves to undertake such a strategy, future reporting to Council will seek approval to proceed. It is intended that the strategy will be designed to minimize the financial impact on existing capital budgets by leveraging existing plans, planned asset replacement cycles, external funding, and internal reserves to support sustainability initiatives. Furthermore, decreasing costs of advanced technologies and renewable alternatives are making investments in energy efficient asset replacement more affordable.

Link to Strategic Priorities

Applicable	2019-22 Strategic Priorities
<input checked="" type="checkbox"/>	Make the Town of Tecumseh an even better place to live, work and invest through a shared vision for our residents and newcomers.
<input checked="" type="checkbox"/>	Ensure that Tecumseh's current and future growth is built upon the principles of sustainability and strategic decision-making.
<input type="checkbox"/>	Integrate the principles of health and wellness into all of Tecumseh's plans and priorities.
<input checked="" type="checkbox"/>	Steward the Town's "continuous improvement" approach to municipal service delivery to residents and businesses.
<input type="checkbox"/>	Demonstrate the Town's leadership role in the community by promoting good governance and community engagement, by bringing together organizations serving the Town and the region to pursue common goals.

Communications

Not applicable ☐

Website ☒ Social Media ☐ News Release ☐ Local Newspaper ☐

This report has been reviewed by Senior Administration as indicated below and recommended for submission by the Chief Administrative Officer.

Prepared by:

Daniel Wolicki
Manager Facilities & Energy Management

Reviewed by:

Tom Kitsos, CPA, CMA, BComm
Director Financial Services & Chief Financial Officer

Reviewed by:

Paul Anthony, RRFA
Director Community & Recreation Services

Recommended by:

Margaret Misek-Evans, MCIP, RPP
Chief Administrative Officer

Attachment Number	Attachment Name
1	Town of Tecumseh ECDM Plan Update