



Subject: Energy Conservation and Demand Management Plan 2024-2029

To: Council

From: Public Works Department

Report Number: 2024-137

Meeting Date: June 25, 2024

Recommendation:

That Public Works Department Report 2024-137 be received; and

That the Energy Conservation and Demand Management Plan attached as Appendix A be approved.

Purpose:

The purpose of this report is to obtain Council's approval of the 2024-2029 Energy Conservation and Demand Management (ECDM) Plan, which, upon approval, will be published on the City's website. As required by the *Electricity Act, 1998*, municipalities are required to prepare an ECDM Plan and to annually report energy consumption.

Background:

Under the *Electricity Act, 1998*, Ontario Regulation 25/23 requires that all broader public sector agencies:

- Report their annual energy consumption and greenhouse gas (GHG) emissions; and
- Develop, update, and implement ECDM plans every five (5) years and make it available to the public by July 1.

The 2024-2029 ECDM Plan builds on the previous 2019-2024 version and aims to improve the energy efficiency of municipal facilities while meeting a compliance requirement. Blackstone Energy Services was retained by the City to complete the

ECDM Plan by analyzing electricity and natural gas energy data for facilities that the City owns and operates.

Discussion:

The 2024-2029 ECDM Plan analyzes energy consumption data for nine facility sites in the City and outlines energy conservation measures which will further Port Colborne's Strategic Plan objective of reaching net-zero energy by 2040 through reduced GHG emissions and improved energy efficiency.

The ECDM Plan indicates that through past conservation and demand initiatives, the City has achieved the following results since 2019:

- 1,007,475kwh reduction in electricity use
- 65,231m3 reduction in natural gas use

With a prominent focus on integrating energy management activities and by implementing recommended initiatives, the following targets are expected by 2029, compared with 2023:

- 51% reduction in electricity consumption
- 46% reduction in natural gas consumption
- 37% reduction in GHG emissions

The proposed conservation measures contained with the ECDM Plan vary for each facility and site and are outlined in Section 5.3 of Appendix A. Staff will be completing site-specific evaluations of these recommended projects and focusing efforts on assessing feasibility. Material costs will be further analysed and budgeted for. For any ECDM projects that are introduced in the upcoming capital budget, staff will investigate potential funding sources, such as external funding opportunities through incentives, grants, or rebates.

Staff are also currently taking steps to better understand the pathway to net zero including continuing energy audits and analysis, and actively pursuing grants on feasibility assessments for sustainable designs, retrofits, and renewable energy.

While the projected energy efficiencies from the ECDM Plan's actions are difficult to accurately quantify, any efficiencies and reduced costs that are realized will be assessed regularly on an annual basis to re-evaluate the proposed changes for each year.

While the ECDM Plan provides a comprehensive overview and analysis of energy consumption data and GHG emissions, it should be noted that staff continue to undergo a detailed assessment of the energy billing data to verify accuracy and are conducting detailed reviews of the recommended conservation measures.

If significant discrepancies or improvements are identified after staff conduct detailed assessments of the measures for feasibility, then the plan will be refined and improved, and staff would bring an updated report to the Council for further discussion and approval. The goal is to have an ECDM plan that is both accurate and actionable and staff are committed to updating the plan more frequently to meet this goal, if warranted.

Internal Consultations:

The ECDM Plan was updated to reflect the City's Strategic Plan objectives and has been reviewed within the Public Works Department, specifically with the Fleet and Facilities Division. Internal consultations are ongoing as staff evaluate the feasibility of the recommended measures and any proposed budget items will be brought forward in the 2025 budget deliberations.

Financial Implications:

The ECDM Plan outlines a strategic approach to reducing electricity and natural gas emissions, while mitigating rising utility costs. The proposed measures contained within the ECDM Plan will be further evaluated by staff and will be used to help inform proposed capital upgrades to be performed in the future, which would be presented to Council during budget deliberations. Staff note that a number of these projects have a design component which has not been completed and the estimated project costs are subject to change. There are no financial implications by approving this report.

Public Engagement:

There was no public engagement as part of this plan development.

Strategic Plan Alignment:

The initiative contained within this report supports the following pillar(s) of the strategic plan:

- Environment and Climate Change
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Conclusion:

The ECDM Plan outlines strategic, ambitious goals while recommending specific energy conservation and efficiency measures so the City can reduce GHG emissions, increase energy efficiency, limit annual energy costs, and promote commitment to a sustainable Port Colborne over the next five years. The 2024-2029 Plan recommends an increase of exploration into the feasibility and implementation of renewable and low-carbon energy systems within the City.

Staff will continue to review and validate the ECDM Plan and the recommended strategies contained within. Any changes to the recommended measures will be brought back to Council for approval. Any financial impacts related to the implementation of ECDM projects will be referred to future capital plan deliberations for consideration and inclusion as appropriate. The City will draw on any funding opportunities to advance projects where possible.

Appendices:

- a. Energy Conservation and Demand Management Plan 2024-2029

Respectfully submitted,

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Report Approval:

All reports reviewed and approved by the Department Director and also the City Treasurer when relevant. Final review and approval by the Chief Administrative Officer.