

Subject: Energy Conservation and Demand Management Plan
Summary

Staff Report No. CS-008-24

Commission: Community Services Commission

Date: June 26, 2024

Recommendation:

- 1) That Council adopt the new Town Energy Conservation and Demand Management Plan (ECDMP), in principle, included as Attachment 1; and
- 2) That Council direct Staff to include various initiatives in the Town's Capital Budget Forecast for Council's consideration; and
- 3) That Council authorize staff to post the Town Energy Conservation and Demand Management Plan and 2023 summary of the Town's energy consumption and greenhouse gas emissions on the Ministry of Energy and Electrification's website, as required under Ontario Regulation 507/18, the *Electricity Act*.

1. Purpose:

The purpose of this report is to inform Council of the requirements under Ontario Regulation 507/18, the Electricity Act, and outline the Town's 5-year ECDMP. Staff are also requesting Council's approval of the Plan so that its initiatives can be included in the future capital program to incorporate recommended energy saving initiatives. Once Council provides approval, the ECDMP will be posted along with the Town's 2023 energy consumption and greenhouse gas emissions data on the Ministry of Energy and Electrification's (MOEE) website, to comply with their regulations.

2. Executive Summary:

Under Ontario Regulations 507/18, public sector agencies in Ontario must report annual energy consumption and develop a five-year ECDMP to reduce energy use and greenhouse gas emissions. This requirement updates the Plan created under the Green Energy Act (O. Reg. 397/11), initiated in 2014.

The ECDMP provides a roadmap for energy conservation and management over the next five years utilizing historical usage data, the preferred state of energy for the Town, and financial resources related solely to the achievement of attaining annual goals.

The ECDMP emphasizes projects related to buildings, vehicle fleets, and outdoor lighting. It also outlines organization-wide processes and programs relevant to these operational areas. To maximize the benefits of these energy management initiatives, it is crucial to integrate energy management and sustainability into business decision-making, policies, and operating procedures. The Town of Whitchurch-Stouffville is committed to managing energy and climate-related costs and risks, striving to deliver benefits to both the organization and the community while supporting other essential strategic plans.

For the period of 2019 to 2023, the Town set an overall target for energy reduction through the use of electricity and natural gas, at 8%. While several key factors influenced the data over this period of time, including the COVID-19 pandemic and the removal of a large facility from our operating portfolio (SoccerCity), the Town was able to achieve a 9% savings in energy in that window.

The new ECDMP, covering the period of 2024 to 2029, details the Town's pathway to experience a 7% reduction target in overall energy while also taking critical steps toward reducing greenhouse gas emissions to net zero by 2050.

3. Background:

In 2009, the Province of Ontario enacted The Green Energy Act with the intention to expand renewable energy, encourage energy conservation and create green jobs. Under the Act, Ontario Regulation 397/11 included a directive for Municipalities, Universities, Schools and Hospitals (MUSH) to complete annual energy consumption and greenhouse gas emissions audits, prepare Energy Conservation and Demand Management Plans and define the reporting requirements under the Act.

Under the first phase of the regulation, municipalities were required to submit a summary of annual energy consumption and corresponding greenhouse gas emissions for all facilities including administrative buildings, libraries, fire stations, police stations and water and wastewater infrastructure. All types of energy (electricity, natural gas, fuel oils) were reported, excluding fleet fuel consumption. Operational information such as floor space, operational hours, facility type and so forth was included in the reporting. With the assistance of Dillon Consulting Limited, the summary was submitted to the MOEE by July 1, 2013.

On January 1, 2019, the Green Energy Act was repealed and replaced by an almost identical regulation 507/18 under the Electricity Act.

As part of the second phase requirements, MUSH must report their annual energy consumption and corresponding greenhouse gas emissions annually. The regulation also

stipulates that municipalities must develop and submit a 5-year Energy Conservation and Demand Management Plan that requires the Town to:

- Establish corporate goals and objectives for conserving energy consumption and managing energy demand;
- Identify conservation and demand management measures and associated costs and savings estimates, and;
- Identify any renewable energy infrastructure installed and quantity of energy produced.

This Plan (see Attachment #1) must be updated every five years, and a progress report must be submitted to the MOEE that includes the following:

- A description of current and proposed measures for conserving and otherwise reducing energy consumption and managing its demand for energy;
- A revised forecast of the expected results of the current and proposed measures;
- A report of the actual results achieved; and,
- A description of any proposed changes to be made to assist the Town in reaching any targets it has established or forecasts it has made.

In order to meet the five-year renewal requirements, the Town partnered with IndEco Strategic Consulting Inc. An audit of the key components and achievements of the 2019 Plan was conducted by performing a detailed energy analysis for numerous Town-owned facilities to understand how implemented initiatives coming out of the 2019 Plan effected the Town's energy consumption and greenhouse gas emission.

4. Analysis and Options:

In order to complete the phased requirements of the Act under Ontario Regulations 507/18, Staff contracted IndEco Strategic Consulting Inc. in 2014, 2019 and again in 2024 as a means of delivering consistent information using a common, shared vision for both short-term and long-term goal-setting over that time. This firm has completed a detailed energy audit report which included comprehensive interviews of key operational and supervisory staff, as per the provincial regulations.

The MOEE requires that the energy consumption and greenhouse gas emissions report for 2023 and a new 5-year Plan be uploaded to their website for the public to view by July 1st, 2024.

The 2019-2024 Plan focused on energy management strategies at many of our primary facilities, including the Municipal Offices, the W-S Leisure Centre, Stouffville Clippers Sports Complex and Stouffville Arena. Almost 70% of the initiatives outlined in the Plan have been either completed, are in progress or are planned in the near future. At the forefront of these actions completed was the conversion of 983 lights, across numerous

facilities, from fluorescent bulbs to LED panels, which is estimated to save 237,823 kwh/a (kilowatt hours per annum) collectively, over time.

Unfortunately, the COVID-19 pandemic fell within this time period and skewed usage numbers across the province. Provincial comparators were last available in 2021, as displayed in the Plan, but municipalities across the province were all unique in reacting to when, how and if facilities were accessed when restrictions were relaxed to permit escalating attendance.

4.1 2024-2029 Plan

Staff from numerous departments, specifically Community Services, Corporate Services, and Public Works, have worked with the consultants to determine the methodology for updating our current municipal Energy Conservation and Demand Management Plan that involves:

- Conducting energy auditing activities
- Reviewing auditing recommendations and prioritizing projects
- Developing the Plan based on a priority project listing
- Implementation of the Plan

IndEco audited data, where available, from the past five years to prioritize projects and develop a municipal energy conservation goal based on identified potential energy savings. Some projects for 2024, including the installation of high-efficiency boilers at two of our facilities, have already been started and will continue to be implemented as planned throughout the duration of the year.

Through implementation of the initiatives in the Plan, the Town hopes to achieve an 7% reduction in energy consumption in a progressive manner – 1% in each of 2025, 2026 and 2027 and 2% in each of 2028 and 2029.

Option A

That Council adopt the new Town Energy Conservation and Demand Management Plan (ECDMP), in principle, included as Attachment #1, and direct Staff to include various initiatives in the Town's Capital Budget Forecast for Council's consideration.

Furthermore, that Council authorize staff to post the Town Energy Conservation and Demand Management Plan and 2023 summary of the Town's energy consumption and greenhouse gas emissions on the MOEE's website, as required under Ontario Regulation 507/18, the Electricity Act.

5. Financial Implications:

By renewing our partnership with IndEco Strategic Consulting Inc. to review and update our Energy Conservation and Demand Management Plan, having retained historical data from previous reports, the cost to complete the process and meet the requirements of the Act was just over \$9,000. This expense was included as a part of our 2024 Capital budget.

Staff will be preparing a list of potential capital projects identified in the five-year Plan to be included in the 2025-2029 Capital Budgets.

The updated Plan provides a guideline (Table 8 in Attachment 1) of annual Capital expenditure and a targeted savings in gas and electricity to be achieved because of each specific initiative.

6. Alignment with Strategic Plan:

1. A Healthy and Greener Town
Increase Offerings and Opportunities for Active Living
2. Good Governance
Provide Good Governance
3. Organizational Effectiveness
To Elevate our Organizational Effectiveness

7. Attachments:

1. Attachment 1 - Energy Conservation and Demand Management Plan, 2024-2029.

8. Related Reports:

None.

Author: Brian Slater, Manager, Facilities Development & Operations

For further information on this report, please contact the Department Head: Rob Braid, Commissioner of Community Services at 905-640-1910 or 1-855-642-8697 ext. 2245 or via email at rob.braid@townofws.ca