
Subject: Niagara Region Conservation and Demand Management Plan Update 2019-2023

Report to: Corporate Services Committee

Report date: Wednesday, June 12, 2019

Recommendations

1. That the 2019-2023 Conservation and Demand Management Plan **BE APPROVED**.

Key Facts

- The purpose of this report is to obtain Council's approval of the 2019-2023 Energy Conservation and Demand Management (CDM) Plan, which, upon approval, will be published on the Region's website.
- It is a requirement of Ontario Regulation 507/18, under the Electricity Act, for the Regional Municipality of Niagara to publically post a Conservation and Demand Management Plan by July 1, 2019, and report annually on Green House Gas emissions.
- The Niagara Region used 91,814,779 kWh, of electricity, 5,904,162 cubic meters of Natural gas, and spent \$14,084,919 on utilities in 2018.
- Measures in the CDM plan outline an estimated reduction of 7.9% on electricity, 4.4% on natural gas and how to avoid spending an additional \$972,222 on utilities in the year 2023 (for the existing facilities that were reported on)

Financial Considerations

In 2018, The Niagara Region consumed 91,814,779 kWh of electricity and 5,904,162 cubic meters of natural gas in order to operate buildings, facilities, structures, street lights and pumping stations. The associated costs were \$12,560,009 for electricity and \$1,524,910 for natural gas, for a total of \$14,084,919.

The details of the buildings that were included in the analysis can be found in the attached 2019-2023 Conservation and Demand Management (CDM) plan. In 2018, those facilities consumed 67,308,849 kWh electricity (73% of the total), 5,055,885 cubic meters of Natural Gas (86% of the total), and emitted 12,440 metric tonnes of CO₂ (equivalent) to the atmosphere.

The goals of the updated plan are detailed in Appendix 1. To summarize, the recommendation of the CDM plan is to reduce overall Electricity consumption by an

estimated 7.9% and overall Natural Gas consumption by an estimated 4.4% of the 2018 baseline values by 2023 (for the existing facilities that were reported on).

This is considered the “minimum” scenario, which would bring those buildings in the report with the poorest energy performance up to the Ontario median (for each building type). The required investment to achieve this goal would be approximately \$3,277,281 over the next 5 years. This would be considered in future capital budget requests.

The “maximum” scenario would bring the poorest performing buildings up to the top 33% of Regional buildings. The details of those goals are discussed further in the CDM plan, and would require a significantly higher commitment and financial investment.

The recommendation is to at least satisfy the “minimum” scenario.

If nothing is done, and electricity and natural gas consumption remains at 2018 levels, there will be an estimated \$972,222 increase in overall utility costs in the year 2023 compared to 2018. These figures are based on the existing facilities that were reported for 2018 baseline energy consumption with a conservative estimate for escalating energy costs.

Analysis

The 2014 Energy Conservation and Demand Management Plan had a goal to reduce overall energy consumption by 5% of 2011 by 2018. Additionally, the 2013 Corporate Climate Change Action Plan had set a goal to reduce overall Green House Gas emissions to 2006 levels by 2016. Niagara Region was able to meet both of these goals (as referenced in Tables 39 and 40 of the report – page 34).

While the “Green Energy Act, 2009” was cancelled and O.Reg 397/11 “Energy Conservation and Demand Management Plans” was revoked on January 1, 2019, the requirement for “Broader Public Sector: Energy Reporting and Conservation and Demand Management Plans” was moved to the Electricity Act, 1998, under O.Reg. 507/18.

This regulation under the Electricity Act requires every public agency to report energy consumption and prepare conservation and demand management plans for buildings that are listed in O.Reg. 507/18.

For Niagara Region, this includes all municipal administrative offices and related facilities, ambulance stations and police stations, storage facilities where equipment or vehicles are maintained, repaired or stored, and buildings or facilities related to the treatment or pumping of water or sewage. Long Term Care homes are not required to be included, but they have volunteered to be a part of the CDM plan to be consistent with the previous plan. Niagara Regional Housing, Child Care buildings, landfill and

recycling buildings and leased buildings where the property owner pays the utilities were not included.

The regulation requires that municipalities prepare, publish and implement energy conservation and demand management plans. A conservation and demand management plan is composed of the following:

1. A summary of annual energy consumption and greenhouse gas emissions for its operations, and
2. A description of previous, current and proposed measures for conserving and otherwise reducing the amount of energy consumed, including a forecast of the results of current and proposed measures.

Energy Conservation and Demand Management Measures

The regulation requires that every public agency shall publish on its website and make available to the public in printed form at its head office, on or before July 1, 2019, a Plan that is to include:

- Information on the public agency's annual energy consumption during the last year for which complete information is available for a full year,
- Goals and objectives for conserving and otherwise reducing energy consumption and managing its demand for energy,
- Proposed measures under its energy conservation and demand management plan,
- Cost and saving estimates for its proposed measures,
- A description of any renewable energy generation facility operated by the public agency and the amount of energy produced on an annual basis by the facility,
- A description of ground source energy, solar thermal energy harnessed and proposed plans to implement heat pump, thermal air or water technology
- The estimated length of time the public agency's energy conservation and demand management measures will be in place, and
- Confirmation that the energy conservation and demand management plan has been approved by the public agency's senior management.

Energy Consumption and Greenhouse Gas Emissions Reporting

The regulation requires that the Energy Consumption and Greenhouse Gas Emission Template for operations must be submitted to the Minister of Energy, published on its internet site and made available in printed form at its head office. On or before July 1 of every year, starting 2011 and every year thereafter, the template energy and emissions data must be updated. Submissions have been made by Niagara Region and can be accessed at the Ministry of Energy of Ontario website.

To meet the requirements of the updated CDM plan, stakeholder engagement was made among Energy Management, Long Term Care, Water/Wastewater, Planning, and with the consultant who authored the plan. The group agreed that realistic and achievable goals were desired to be outlined. It is important to note that in order to achieve the goals laid out in the CDM plan, it is the responsibility of each department to plan for Capital projects to achieve these goals.

Alternatives Reviewed

This Plan was written as the Region's response to the requirements established by the Province of Ontario under O. Reg. 507/18. There was no alternative to having a Plan in place, as it is required to be posted by July 1, 2019.

Relationship to Council Strategic Priorities

The current term (2019 to 2022) Council Strategic plan, which will set the stage for decision making across the organization, is currently in work. However, the posting of the CDM plan is required by legislation, so posting the plan will meet the Region's duties to comply with Provincial requirements.

Other Pertinent Reports

CSD 85-2014	Niagara Region Conservation and Demand Management Plan
CSD 77-2013	Energy Reporting and Conservation Demand Management Plans 2013 Action Plan Corporate Climate Change Action Plan (Partners for Climate Protection: Milestones 2 and 3)
CSD 104-2012	Niagara Region Corporate Energy Strategy
CSD 71-2012	Energy Reporting and Conservation Demand Management Plans
CSD 81-2011	2010 Energy Conservation Initiatives
ICP 15-2010	2006 Corporate Greenhouse Gas Emissions Inventory

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Appendices

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