



**ENERGY CONSERVATION AND DEMAND
MANAGEMENT PLAN
2024-2029**

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Executive Summary

The Town of Rainy River (the Town) has been committed to corporate energy management since the early 2000s.

In 2014, the Town submitted its first Corporate Energy Conservation and Demand Management (CDM) Plan to the Ontario Ministry of Energy in compliance with the former Ontario Regulation 397/11 Green Energy Act, which was replaced next by the Ontario Regulation 507/18 Electricity Act, and then again replaced by the current Ontario Regulation 25/23 made under the Electricity Act (1998). This regulation mandates that municipalities document and report on the results of their CDM plans and update their CDM every five (5) years.

This report meets the regulatory requirements by:

- Documenting energy management initiatives and reporting energy and natural gas statistics throughout the Town; and
- Outlining the goals and initiatives to be undertaken by the Town over the next five (5) years.

Ontario Regulation 25/23

In February of 2023, the Provincial Government introduced Ontario Regulation 25/23 (O.Reg. 25/23) under the Electricity Act, 1998. This regulation requires certain public agencies – Municipalities, Municipal Service Boards, School Boards, Post-Secondary Educational Institutions, and Hospitals – to report on their energy consumption and greenhouse gas (GHG) emissions annually. This also mandates that public agencies develop, and update every five (5) years, an Energy Conservation and Demand Management (CDM) Plan. The intent of this regulation is to help the broader public sector (BPS) organizations better understand and report their energy consumption, help benchmark, encourage energy conservation and demand management activities within their organizations, and then ultimately make this information available to its public.

In order to comply with O.Reg. 25/23 – which supersedes the previous O.Reg. 397/11 and O.Reg.507/18 – the Town is required to submit annual energy consumption and GHG emissions for each calendar year for facilities that the Town owns or leases, that are:

- a) The building or facility is heated or cooled and the public agency is issued the invoices and is responsible for making the payments for the building or facility's energy consumption
- b) The operation is related to the treatment of water or sewage, whether the building or facility is heated or cooled, and the public agency is issued the invoices and is responsible for making the payments for the building or facility's energy consumption

2014 Energy Conservation and Demand Management Plan Results

The Town's 2014 CDM Plan covered its plan to create an energy conscientious workforce and pursue energy conservation measures and best practices into all operations and facilities where possible. This plan covered a period of 2014 through to 2019 and through reporting captured the following:

- Facilities and buildings owned and operated by the Town
 - Community Centre
 - Health Centre
 - Lift Station
 - Municipal Garage and Fire Hall
 - Recreation Centre Ice Plant
 - Streetlights
 - Town Hall
 - Water Treatment Plant
 - Waterfront Services Building

The 2014 CDM was developed according to the Ministry of Energy's direction to provide the Municipalities annual energy consumption information to the public and set goals and actions for conserving energy and reducing GHG emissions. The goals set forth in this CDM were as follows:

"The goal of the Plan is to maximize the efficient use of the Town's fiscal resources and to minimize any negative environmental impact of the Town's operations.

By 2019, the Town will reduce the energy consumption by 3% versus our 2012 figures."

The 2014 CDM also set forth the following programs, processes, and projects that were to be worked on during that four (4) year period:

"The Town in the process of upgrading its streetlights from a high-pressure sodium technology to the much more efficient LED technology. "

The following tables detail energy and natural gas usage results which show a general consistency over time (noting that reporting requirements changed over this duration).

Please note that weather conditions were not recorded – some fluctuation may occur due to unusual hot or cold years.

The impact of COVID-19 may be seen in the sharp decline in energy use in 2020 with slow return to previous averages in 2021-2022.

Greenhouse Gas Emissions were calculated by Energy Star[®], which is the reporting program that the Province of Ontario has mandated. The calculation of greenhouse gas emissions by the Energy Star program is dependent on a variety of factors which are reviewed annually.

Electricity (kWh)

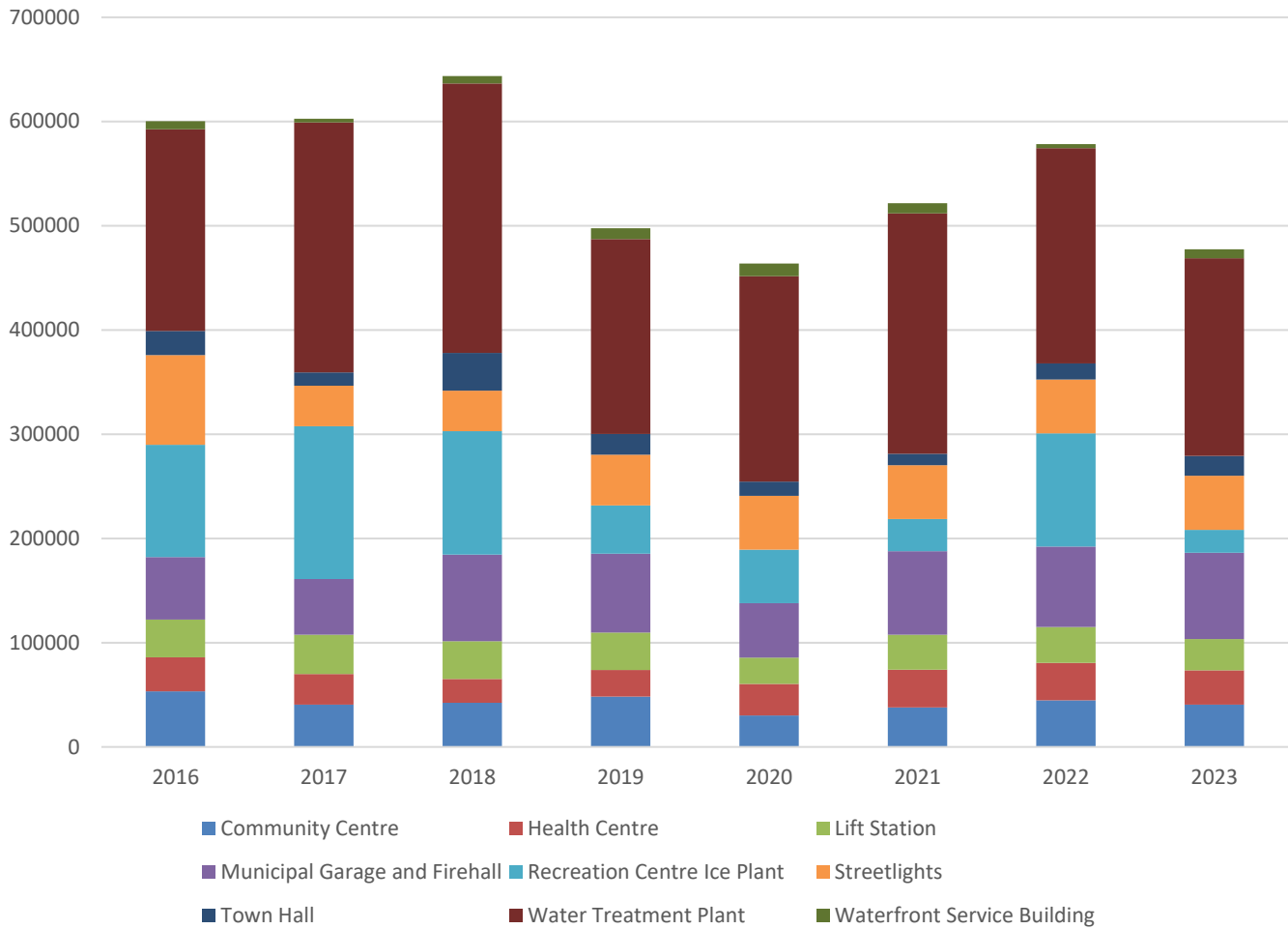


Figure 1: Electricity Use 2016-2023

	2016	2017	2018	2019	2020	2021	2022	2023
Community Centre	53205	40572	42424	48328	30080	37771	44878	40700
Health Centre	32829	29270	22800	25365	30420	36204	35706	32730
Lift Station	36285	37900	36150	36100	25310	33630	34570	30210
Municipal Garage and Firehall	59915	53401	83068	75540	52093	80089	77204	82642
Recreation Centre Ice Plant	107500	146542	118623	46380	51443	31026	108513	22119
Streetlights	86139	38739	38678	48614	51624	51624	51634	51848
Town Hall	23166	13000	36207	20058	13680	10944	15349	19022
Water Treatment Plant	193500	239576	258601	186753	196954	230581	206710	189552
Waterfront Service Building	7869	3814	7232	10473	12286	9918	3683	8620
TOTAL	600409	602813	643783	497611	463890	521787	578247	477443

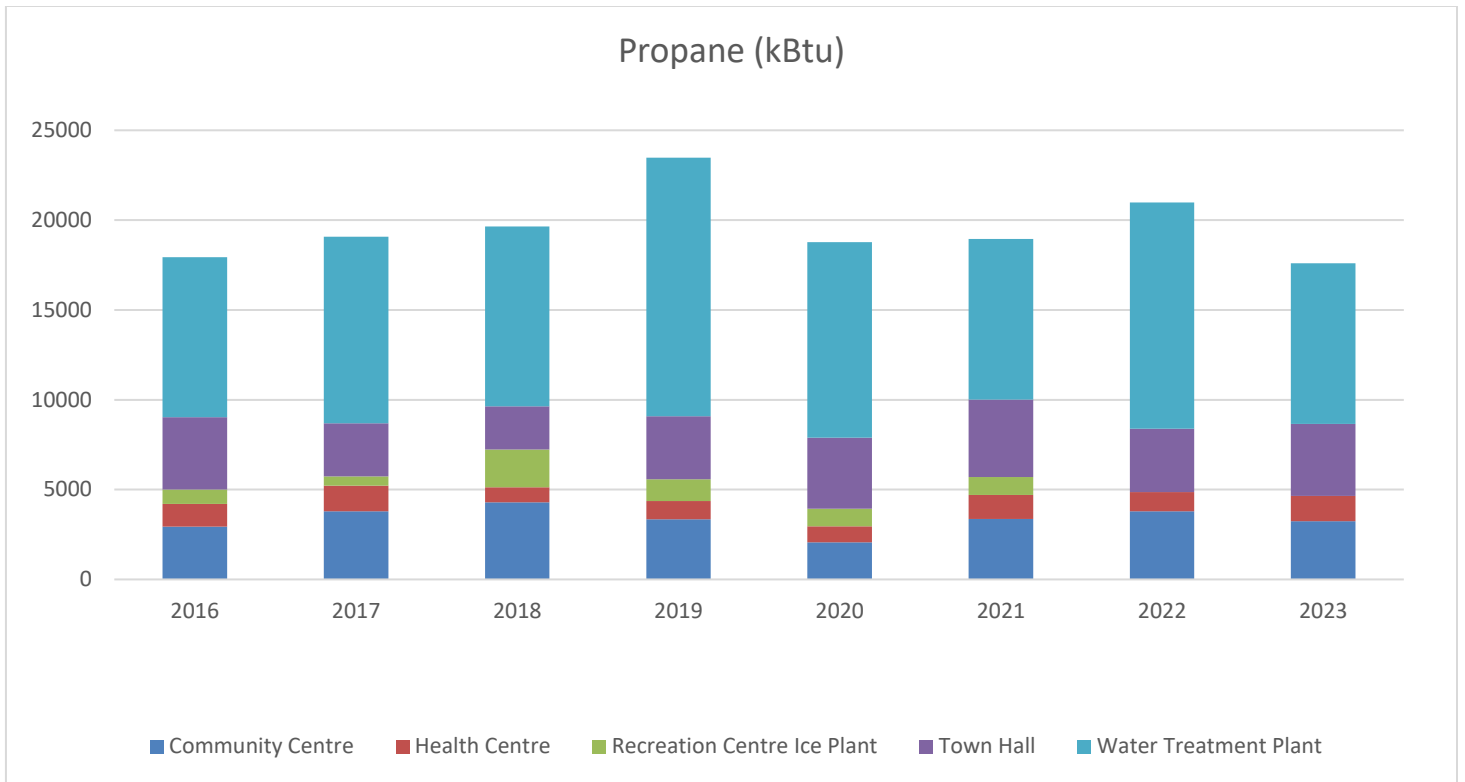


Figure 2: Propane Use 2016-2023

	2016	2017	2018	2019	2020	2021	2022	2023
Community Centre	2932	3793	4299	3340	2064	3364	3793	3249
Health Centre	1272	1417	832	1026	887	1335	1071	1391
Recreation Centre Ice Plant	796	524	2105	1213	994	994	0	0
Town Hall	4036	2950	2396	3513	3952	4320	3527	4014
Water Treatment Plant	8904	10387	10016	14384	10870	8936	12592	8940
Total	17940	19070	19648	23475	18766	18948	20982	17594

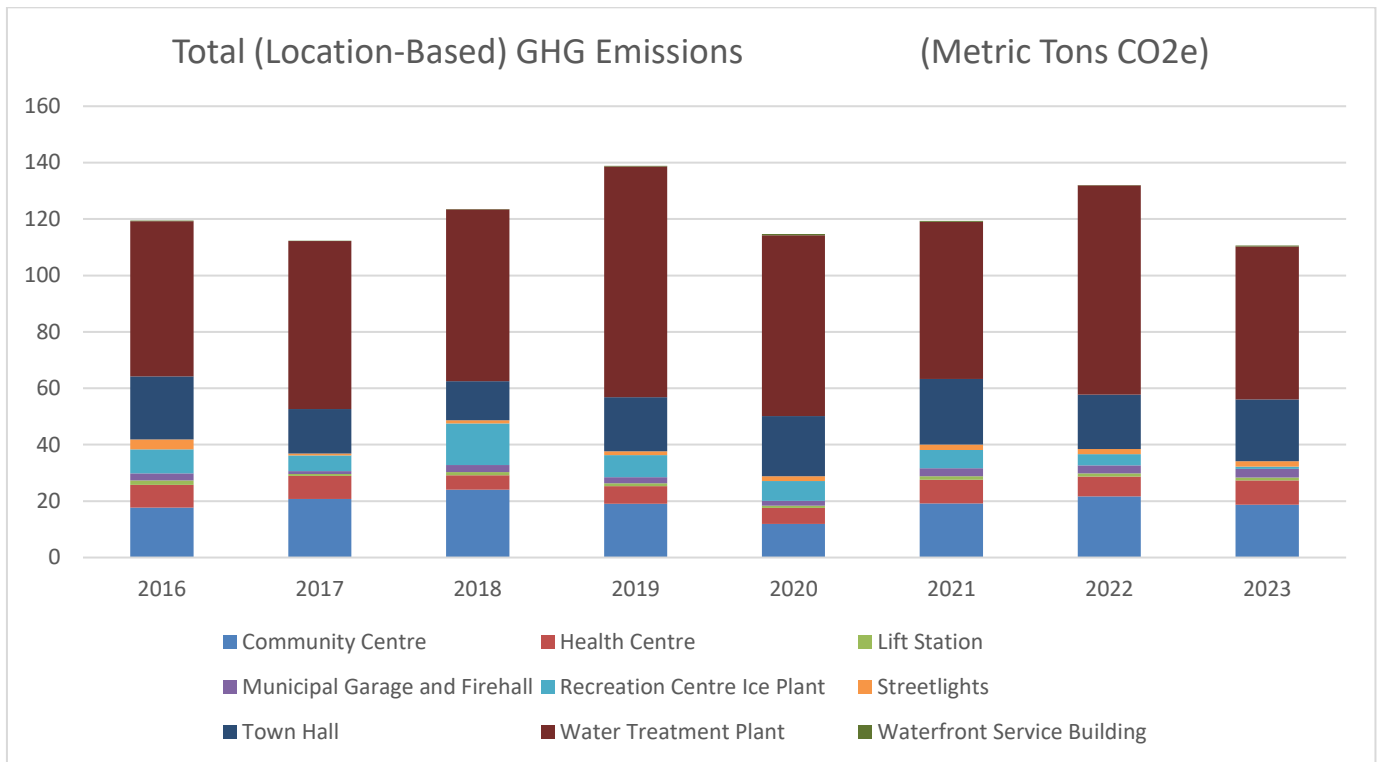


Figure 3: Greenhouse Gas Emissions 201-2023

	2016	2017	2018	2019	2020	2021	2022	2023
Community Centre	17.7	20.8	24.1	19.1	11.9	19.2	21.7	18.7
Health Centre	8.1	8.1	5.1	6.2	5.7	8.4	7	8.6
Lift Station	1.5	0.7	1.1	1	0.8	1.2	1.2	1.1
Municipal Garage and Firehall	2.5	1	2.5	2.2	1.7	2.9	2.8	3
Recreation Centre Ice Plant	8.6	5.6	14.7	7.8	7	6.4	3.9	0.8
Streetlights	3.5	0.7	1.2	1.4	1.7	1.9	1.9	1.9
Town Hall	22.3	15.8	13.8	19.2	21.4	23.3	19.3	22
Water Treatment Plant	55	59.5	60.9	81.7	64.1	55.7	74.2	54.2
Waterfront Service Building	0.3	0.1	0.2	0.3	0.4	0.4	0.1	0.3
Total	119.5	112.3	123.6	138.9	114.7	119.4	132.1	110.6

2024-2027 Energy Conservation and Demand Management Plan

The 2024-2029 CDM Plan is built upon the foundation laid by the 2014 CDM Plan.

The 2024-2029 CDM proposes the following key initiatives, energy standards, and achievable measures and commitments:

- Improving energy efficiency within Town owned and operated facilities where possible;
- Reducing GHG emissions and energy consumption in day-to-day operations where possible;
- Extending the lifecycle of Municipal assets where possible;
- Maximizing fiscal resources through direct and indirect energy cost avoidance;
- Continually monitoring energy consumption and utility usage for Town owned and operated assets;
- Demonstrating leadership and awareness within the Town by creating a culture of conversation and designating overall leadership for corporate energy management; and
- Setting achievable measures and targets to reach.

This CDM will be a live document that is continually monitored and updated, providing a roadmap to continue to develop and improve the Town's approach to energy conservation and demand management, all while continuing to comply with the requirements of O. Reg 25/23 and any future revisions.

It is difficult for Administration to suggest any proposed measures or estimate any cost savings due to the fact that implementing changes will depend on funding availability. It should also be noted that any cost savings would be mitigated by the cost of paying for the changes, as well as on-going cost increases to hydro and fuel supplies. However, Administration does intend that the Town will always strive to find the best possible reductions in greenhouse gas emissions and energy demands and these measures will be in place permanently. If the Town of Rainy River receives funding to install ground source heat or solar and wind power, it is expected that greater savings could be found once the cost of installation is fully amortized. It will be the Town's position that any new building will be designed to current LEED Gold Standards provided that the cost is not prohibitive.

Council will task Administration with yearly reporting on any cost increases in heating and lighting, including a breakdown of whether the cost can be controlled, such as ensuring lights are turned off, or whether the cost is due to increasing prices.

Council may consider further energy audits in the future although initially it would prefer to consult with the relevant building staff to see if there are any cost-saving measures that should be implemented. For example, staff may identify a "cold room" that may benefit from increased insulation. This information will be brought to the attention of Council and will be added to this Plan when identified.

Measurement Process

Measurement processes should define the preferred state, identify the current state, identify measures, and document results. The preferred state is where the Town wants to be in regard to energy and energy conservation. For example, the ultimate preferred state would be that all heating and energy sources are independent from current fuel and energy providers (i.e. solar/wind power and ground source heating).

The present state is that the Town is currently dependent on those sources of heat and energy.

It is preferred that measures would now be implemented, such as a Policy stating that it is Council's intention that all buildings be solar powered by 20xx. Due to funding restrictions, Council cannot set such a policy at this time and hope to achieve it.

Finally, the resulting savings would be documented and tracked. Administration will continue to track any possible savings from the goals and objectives identified to date (behavioral measures) and will add new goals and objectives as they become feasible.

Renewable Energy

The Town of Rainy River does not currently have any renewable energy sources available. It is not likely that these will be available in the near future due to cost of installation. If funding becomes available, Council will reconsider this position.

Plan Implementation

It is the intent of the CDM to be a document that is going to be used by Administration to better manage energy use and to reduce energy consumption. It is important that the Plan include tools to aid with the implementation of the Plan such as:

- Prioritize the measures
- Develop timelines for the measures
- Assign responsibility for the measures
- Link the CDM Plan to other corporate activities or goals

As noted above, the Town of Rainy River will be implementing "soft" measures to control energy usage such as ensuring that staff turns out lights in unused rooms. Other measures, such as programmable thermostats will be implemented when funding allows, or renovations are occurring. As such, the Town of Rainy River deems all of the measures to be of the utmost priority and are expected to be implemented immediately when practical. The staff will be tasked with taking responsibility for these measures in their relevant workplaces. Other corporate activities or goals such as economic development and expansion shall have regard for these goals and objectives when in the planning stages. As the Town of Rainy River is a small, rural municipality with minimal staff, Council feels that each employee will be able to implement the measures and track any cost savings without a detailed plan.

Proposed Measures

As such, the Town is looking to implement the proposed measures while continuing to promote successful conservation practices. The Town is aiming to reduce its energy consumption within its facilities by 1-4% between 2024 through to the end of 2029. Proposed measures to support this are as follows:

Programs		
Employee Participation Program	Staff are invited to engage in providing comments and suggestions on existing energy savings or bring forward new ideas.	Ongoing
Purchases or Repairs	Any purchases, repairs, or renovations shall have preference for energy savings or reductions.	Ongoing
Processes		
Energy Reporting	Energy consumption reports would be created on an annual basis and made public as per regulations.	Ongoing
Continuous Improvement	Encourage staff to look at new/existing continuous improvement tools and processes and potential areas for improvement.	Ongoing
Projects		
LED Light Replacement Program (entire Town)	Replace all lights in buildings and streetlights with LED lightbulbs	Ongoing
Installation of motion sensors (Town Hall)	Installation of motion sensor for lights in the bathrooms in the Town Hall	Completed

The proposed measures will be reviewed during annual budget review and discussions. These measures may change as priorities of Council are altered, better opportunities come forward, or technologies become available that could be an improvement.

The following are examples of grants and subsidies that staff will continue to explore under this goal:

- Save on Energy Program to get funding for incentives for Lighting, HVAC, Automation, Compressors and Chillers.
- Federation of Canadian Municipalities' Green Municipal Fund (GMF) to finance capital projects that improve air, water, and land and reduce greenhouse gas emissions
- Municipal Energy Plan Program (MEPP) to get funding to create a new plan or continue to work on an existing plan. The program covers 50 per cent of eligible costs up to a maximum of: \$90,000 by hiring internal staff to create a new plan or \$25,000 to continue work on an existing plan (e.g. update energy data or maps, engage stakeholders, or develop more detailed implementation plans)

Plan Preparation, Approval, and Energy Leader

This plan was prepared and will be maintained by the CAO/Clerk-Treasurer. The Town of Rainy River Council and Staff are committed to energy conservation and demand management.

This plan was adopted by Council at the December 9th 2024 regular council meeting.

Through its Official Plan, the Town has committed to ensure that all infrastructure, including sanitary sewers, water distribution and stormwater management facilities, and roads meet the needs of present and future residents and businesses in an efficient, environmentally sensitive, cost effective and timely manner.

Public Availability

The Town of Rainy River Plan will be made available to the public on the Municipal website, www.rainyriver.ca

Physical copies will be made available at the municipal office upon request.

Conclusion

The 2024-2029 Energy Conservation and Demand Management Plan for the Town of Rainy River will assist the Town in meeting energy related goals, reporting requirements as per O.Reg. 25/23, and striving for continuous improvement related to both industry best practices and internal practice improvements. These goals will be established annually through Council's approved budget.