



**Energy Conservation and
Demand Management Plan
(2024 – 2029)**

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1.0 INTRODUCTION AND BACKGROUND

In 2009, Ontario Regulation (O. Reg.) 397/11 required public agencies in Ontario, including municipalities, to publicly report on energy consumption and associated greenhouse gas (GHG) emissions annually, and publish and implement five-year Energy Conservation & Demand Management (CDM) Plans to monitor progress and update their Action Plans.

Starting on February 23, 2023, a new regulation was introduced, O. Reg. 25/23, which replaced O. Reg. 507/18. Municipalities are still required to report annually on energy use and GHG emissions and to prepare and make public updated 5-year Energy CDM Plans. As such, the Town of Innisfil continues to report annually on its energy consumption and associated GHG emissions and continues to develop and implement an Energy Conservation & Demand Management Plan every five years.

Hard copies of the CDM plan are available at the Town Hall located at 2101 Innisfil Beach Rd.

2.0 EXECUTIVE SUMMARY

This Energy CDM Plan (hereafter referred to as the Plan) is an updated plan that outlines resources and measures to improve energy efficiency and reduce greenhouse gas (GHG) emissions.

The Energy CDM Plan is comprised of two parts:

1. A description of previous, current and proposed measures for conserving energy and managing demand of the Town of Innisfil's operations, including a forecast of the anticipated energy savings results of current and proposed Energy Conservation Measures (ECM's).
2. A summary of the Town of Innisfil's annual energy consumption and GHG emissions for its operations.

This five-year Energy CDM Plan (2024 - 2029) presents a high-level review of the Town of Innisfil's facilities and proposes detailed energy management initiatives and ECM's to reduce energy consumption and GHG emissions in its heated and cooled buildings, as well as in its water and wastewater treatment and pumping facilities. This Energy CDM Plan will serve as a tool for the Town of Innisfil to reduce its energy consumption and GHG emissions and a basis to ensure best practices in energy management throughout the Town's operations.

The Plan includes an evaluation of past and current ECM's and an estimation of the energy savings potential of proposed measures. Additionally, the Plan provides an analysis of the historical energy profile, which offers a better understanding of the energy performance of the Town's facility portfolio and operations.

3.0 INTRODUCTION

In July 2019, the Town of Innisfil prepared, submitted and made available an Energy CDM plan to fulfill the requirements of Ontario Regulation 507/18. The 2019 Energy CDM plan provided an overview of Town of Innisfil’s operations, including a summary of the annual energy consumption and GHG emissions and discussed project upgrades and Energy Conservation measures to reduce energy consumption and GHG emissions. The summary of GHG emissions and energy consumption can be found in Appendix B.

Since 2019, the Town of Innisfil has invested and implemented a number of energy efficiency projects resulting in energy savings. The Town also took advantage of incentives and funding streams available through Ontario’s Save on Energy program. A list of these projects can be seen in Appendix A.

4.0 ENERGY CONSERVATION MEASURES

4.1 Previous and Current Measures

4.1.1 Energy Efficiency

Over the period 2019-2024, the Town of Innisfil has been active in implementing energy efficiency projects. Lighting upgrades in multiple facilities have decreased energy demand. The new cold water system at our largest recreation facility has reduced the demand for energy to produce hot water while maintaining a high quality of service for arena users. Save on Energy projects and associated savings are highlighted in Appendix A.

Table 1: Previous Goals, 2019-2024

Measure	Duration
Align with Town of Innisfil Strategic Plan 2030	Medium Term
Implement Energy Conservation Measures	Medium Term

Table 2: Previous and Current Energy Efficiency Projects, 2019-2024

Type of Building	Projects	Description
Administration Buildings	2	*LED Lighting Retrofits
Indoor Recreational facilities and community centers	6	*Reallce flood cold water system on our gold rink ice surface (Eliminating hot water use for

		resurfacing the rink) *LED Lighting retrofits -Churchill C.C full lighting retrofit -IRC Change room retrofits -Stroud Arena (Exterior) *Furnace replacements (Stoud Arena and Morgan Russell Arena)
Fire Stations	1	*Alcona Fire Station #1 - LED Lighting Retrofits
Police Stations	1	*LED Lighting Retrofits (Exterior)
Water and Sewage Treatment Facilities	1	*Alcona Reservoir - LED Lighting Retrofits
Library Facilities	1	*LED Lighting Retrofits

4.1.2 Renewable Energy Generation

The Town of Innisfil has three photovoltaic assets producing electricity as follows:

- 780w off grid supplying the lighting at the Innisfil Gateway Sign located on the 400 north bound hwy, Innisfil Beach Road off ramp.
- 525w behind the meter demonstration panels at the Cookstown library at 20 Church st, Cookstown
- 10Kw MicroFIT solar tracking unit is at 7253 Innisfil Beach Road

4.1.3 Ground Source and Thermal Energy

The Town has one ground-source heat pump in operation at the Cookstown Library. There are no other ground-source projects planned over the next five years.

The Town does not have any thermal energy harnessing by thermal air technology or thermal water technology. There are no plans to do so within the next 5 years.

4.2 Future Measures

To support and help inform the Energy CDM Plan and the Town’s Sustainability Master Plan, the Town of Innisfil will complete a Sustainability Study on a select number of higher energy usage buildings. This will include administration buildings and multi use recreational facilities. The results of this study will help identify both capital and operational improvements, including detailed energy calculations and financial analysis

for each proposed ECM based on implementation cost estimates, energy and operating cost savings, and the Town’s investment criteria, with sufficient details to proceed to implementation.

Based on the Sustainability Study results, which would include detailed operational, and equipment retrofit and replacement recommendations to reduce energy use as well as estimates of resource requirements for completing ECM’s, the Town will create detailed capital project plans to execute recommendations to improve energy performance.

Table 3: Future Goals, 2024-2029

Measure	Duration
Align with Town of Innisfil Strategic Plan 2030	5 years (2024-2029)
Conduct Sustainability Study in select energy consumption buildings	Immediate Term (2024)
Conduct Fleet Feasibility Study	Immediate Term (2024)
Present and have approved the Town of Innisfil Sustainability Master Plan	Immediate Term (2024)
Implement Energy Conservation Measures outlined in both Sustainability Studies to meet the reduction targets outlines within the Sustainability Master Plan.	4 years (2025-2029) Long Term

Table 4: Future Energy Efficiency Projects, 2024-2029

Energy Conservation Measures (ECM’s)	Timeframe
LED Lighting Retrofits	5 years (2024-2029)
Building Automation System (BAS) Upgrades	Immediate Term (2024-2025)
Heat Pump Replacements (Not Ground Source or Thermal)	5 years (2024-2029)
Pool Dehumidification (Decatron) Replacement	Immediate Term (2024-2025)

5.0 TOWN OF INNISFIL SENIOR MANAGEMENT APPROVAL

This report has been prepared by:

Nikki Balazs, Operations Manager, Facilities, Town of Innisfil.

This report has been approved by:

Nicole Bowman, Director of Operations, Town of Innisfil

Appendix A

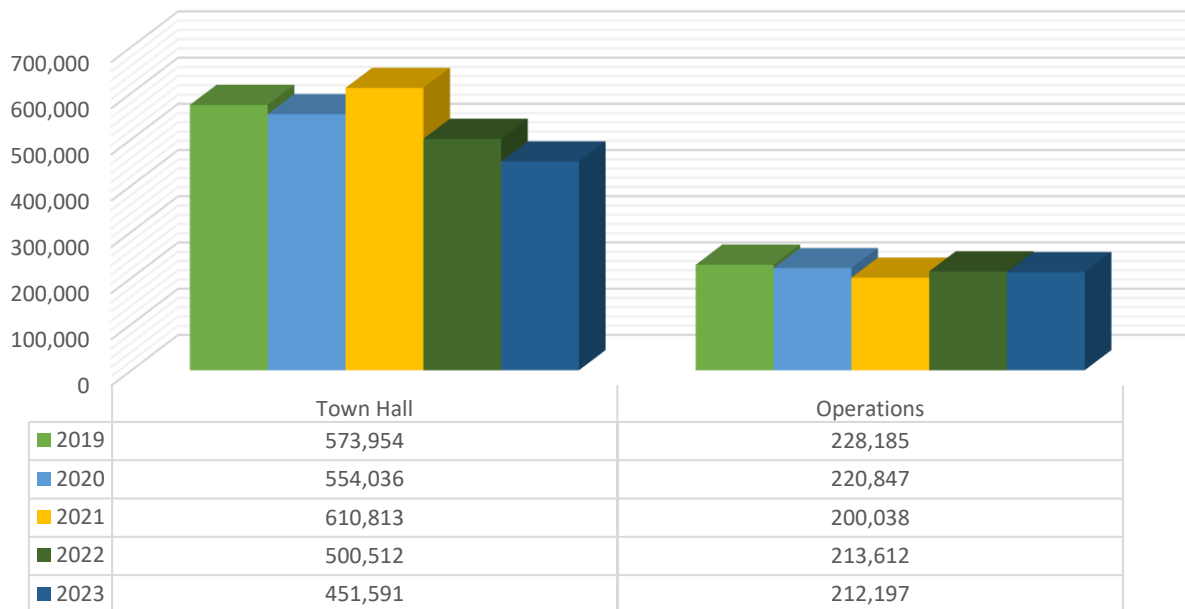
Previous & Current Measures – Save On Energy Report

Save on Energy Program	Name	Information	Address	Status	Year Completed	KW Savings	KWH Savings	Incentive
Retrofit	Town of Innisfil	LED Lighting	982 Innisfil Beach Road	Complete	2019	2	6,758	\$1,088
Retrofit	Town of Innisfil	Exterior Lighting	2101 Innisfil Beach Road	Complete	2020	1	70.387	\$10,042
Retrofit	Town of Innisfil	Deco Streetlights	2101 Innisfil Beach Road	Complete	2021	0	89,233	\$2,233

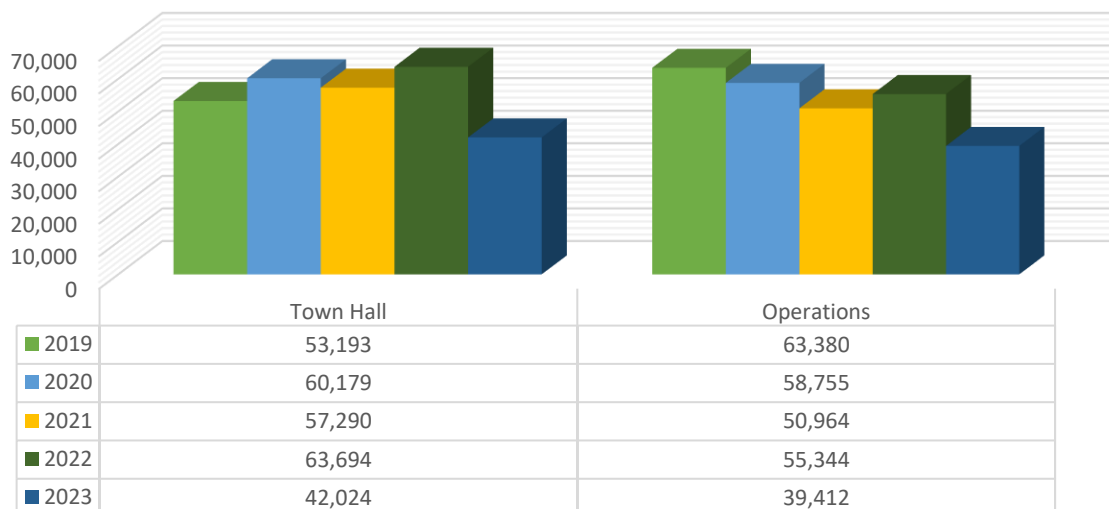
Appendix B

Summary of annual greenhouse gas emissions and energy consumption.

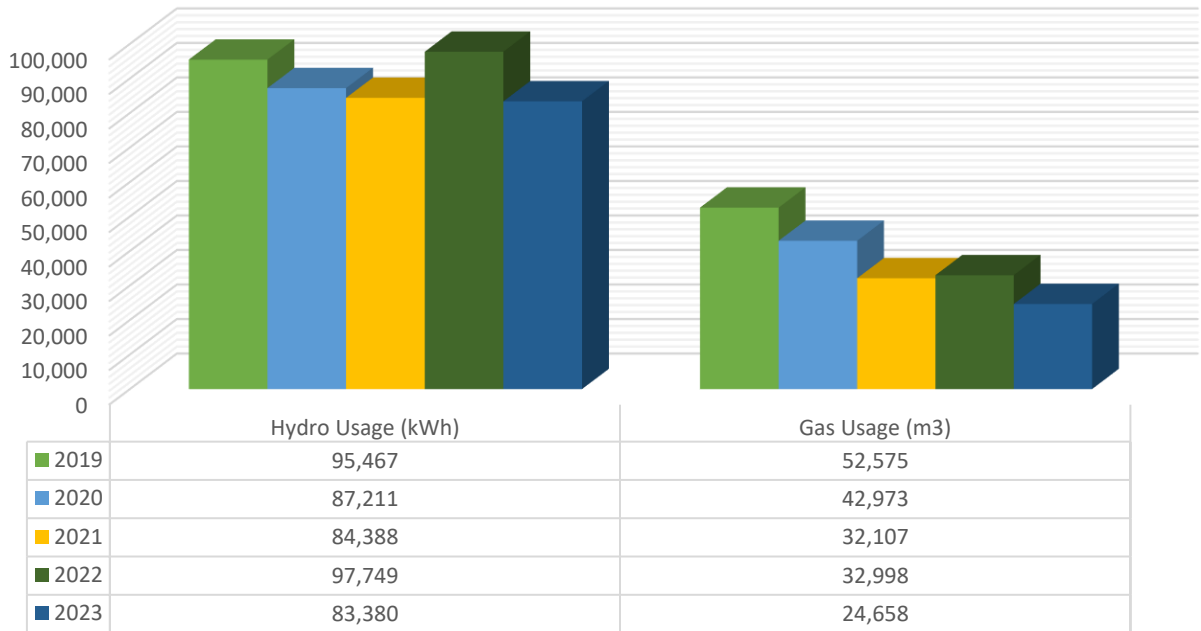
Corporate Administration & Operations Buildings Hydro Usage (kWh)



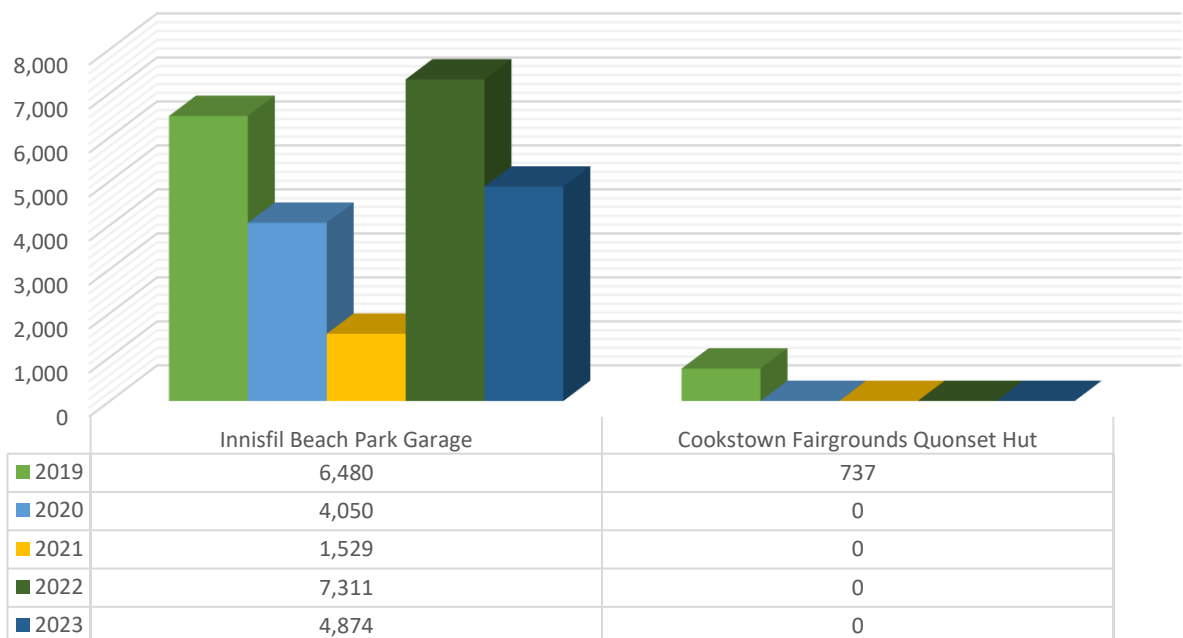
Corporate Administration & Operations Buildings Gas Usage (m3)



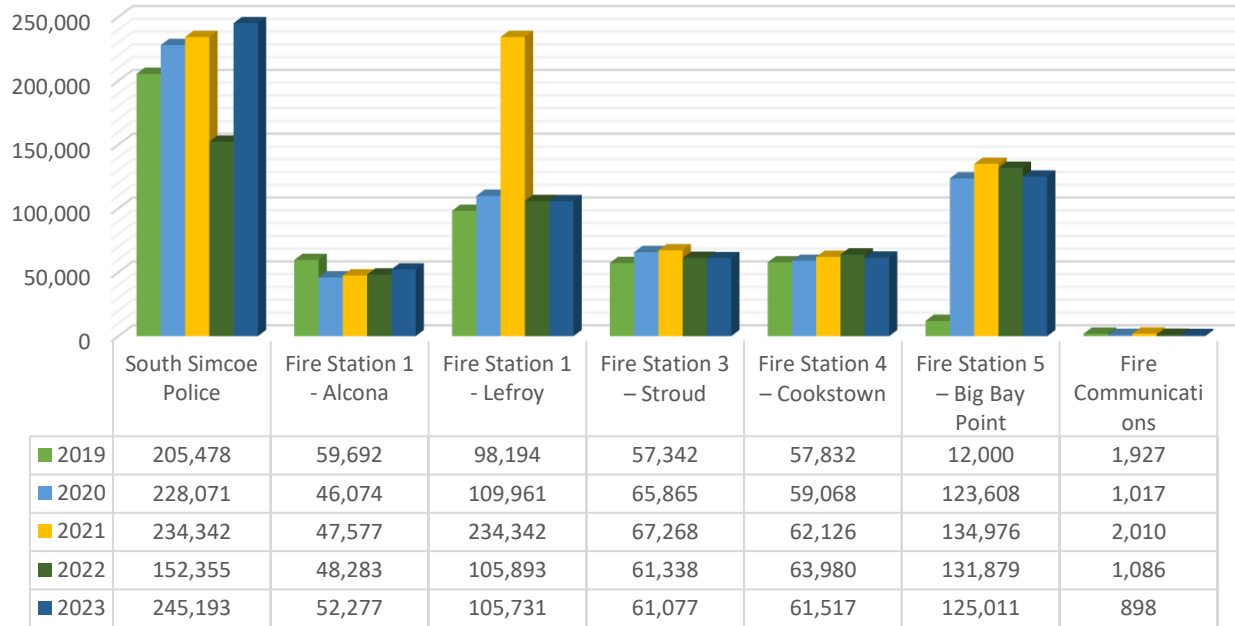
Coveralls & Storage Facilities Sand & Salt Dome



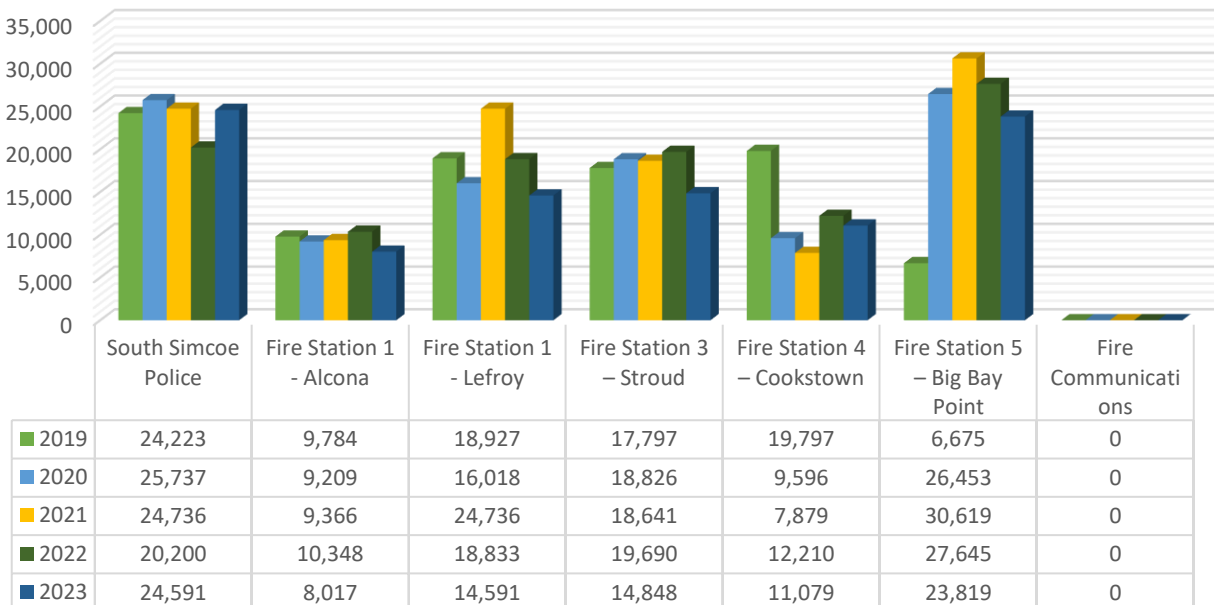
All Town Facilities with Propane Usage (L)



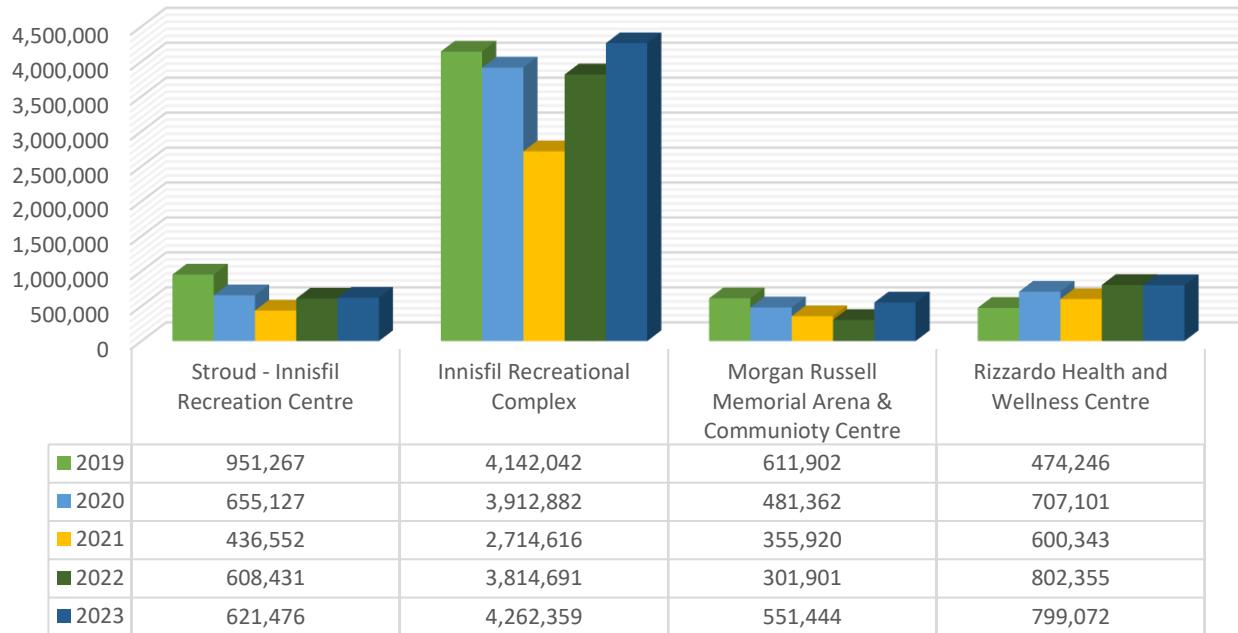
Emergency Response Facilities Hydro Usage (kWh)



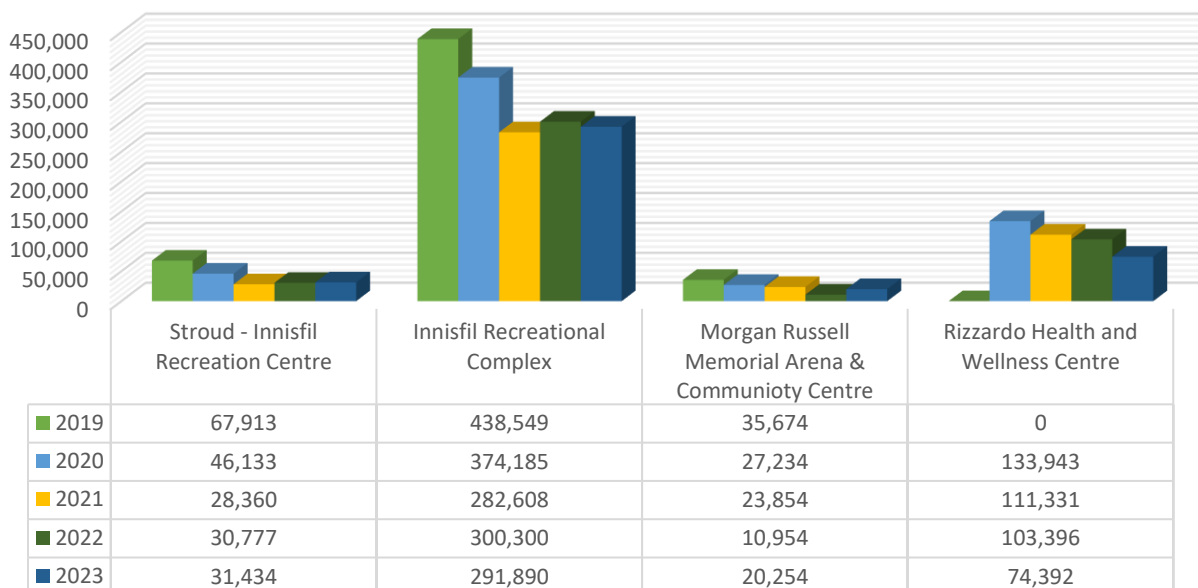
Emergency Response Facilities Gas Usage (m3)



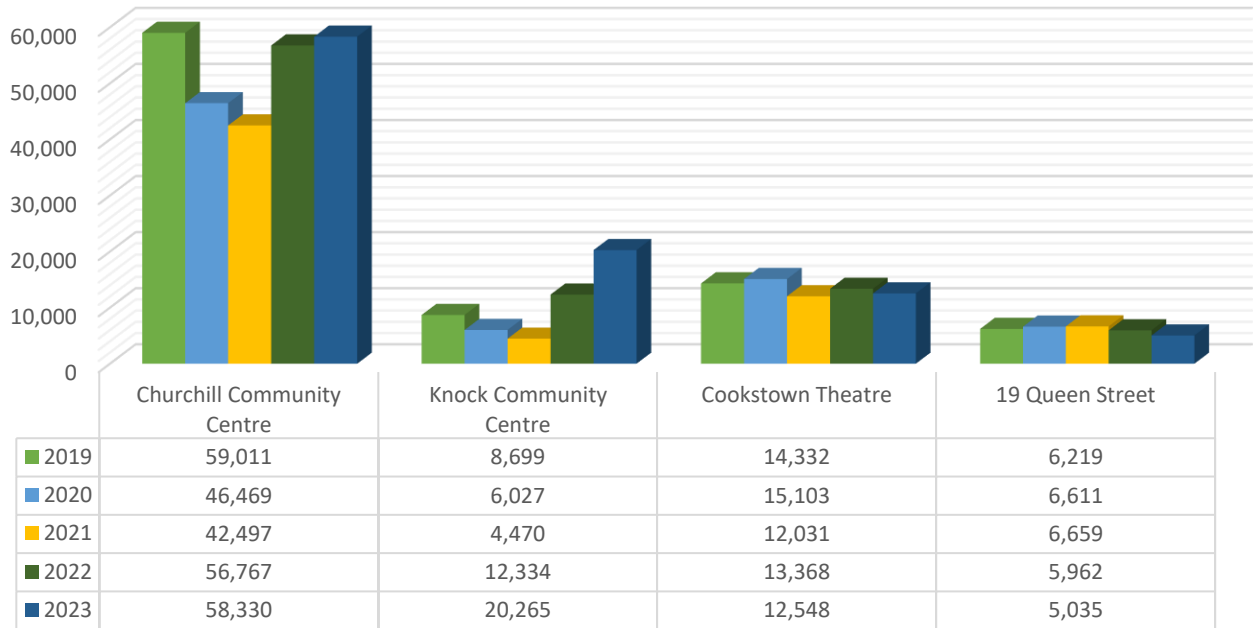
Community & Culture (Arenas & Health Centre) Hydro Usage (kWh)



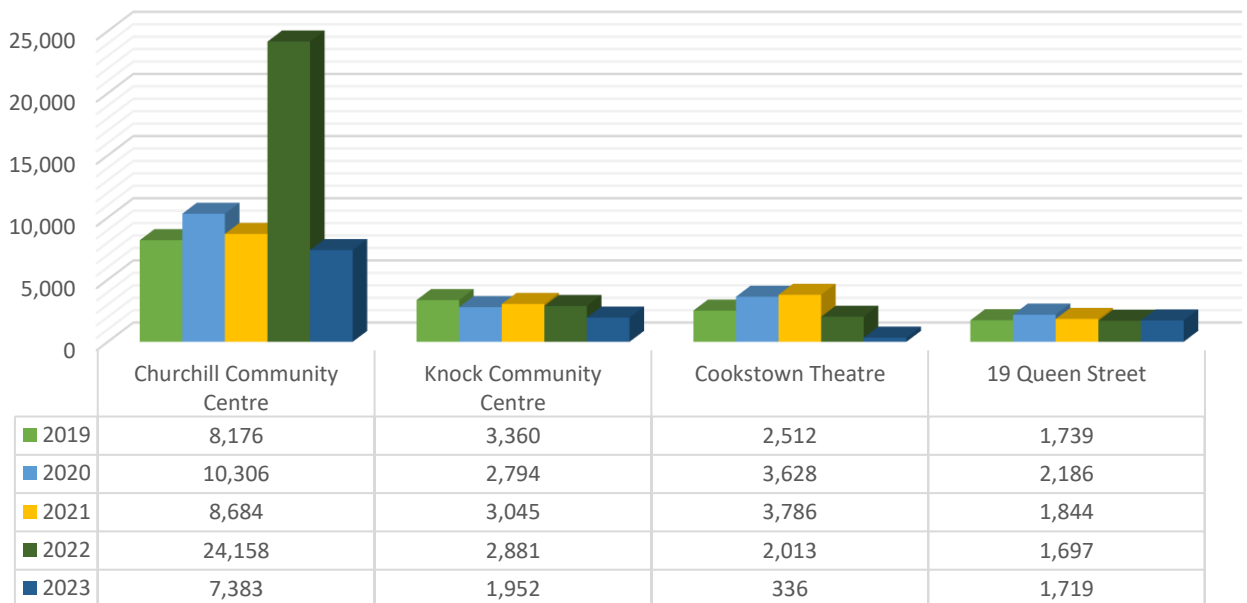
Community & Culture (Arenas & Health Centre) Gas Usage (m3)



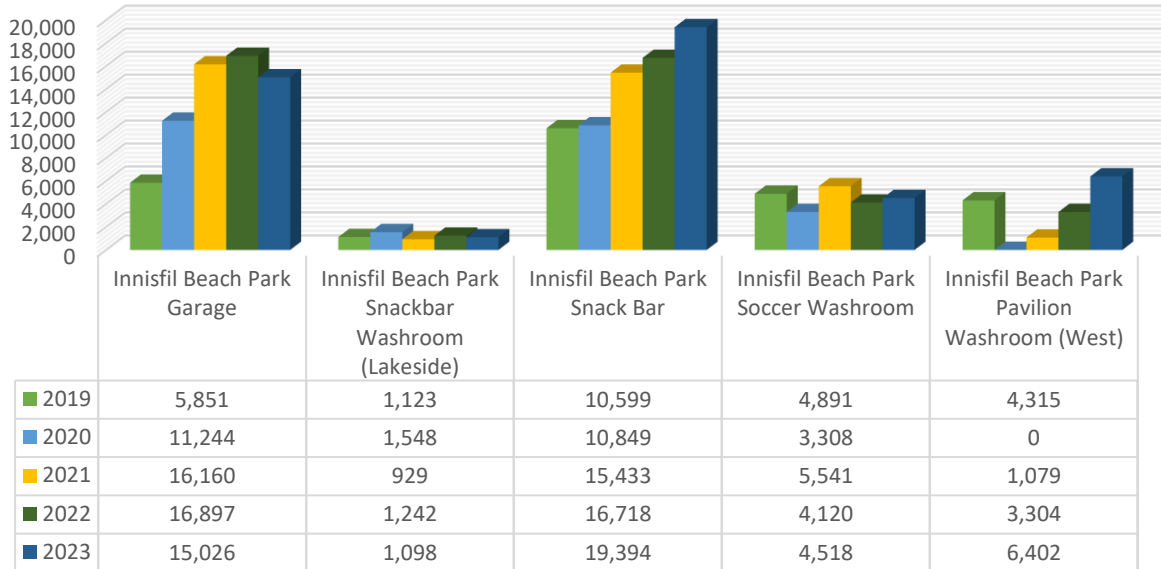
Community & Culture (Other) Hydro Usage (kWh)



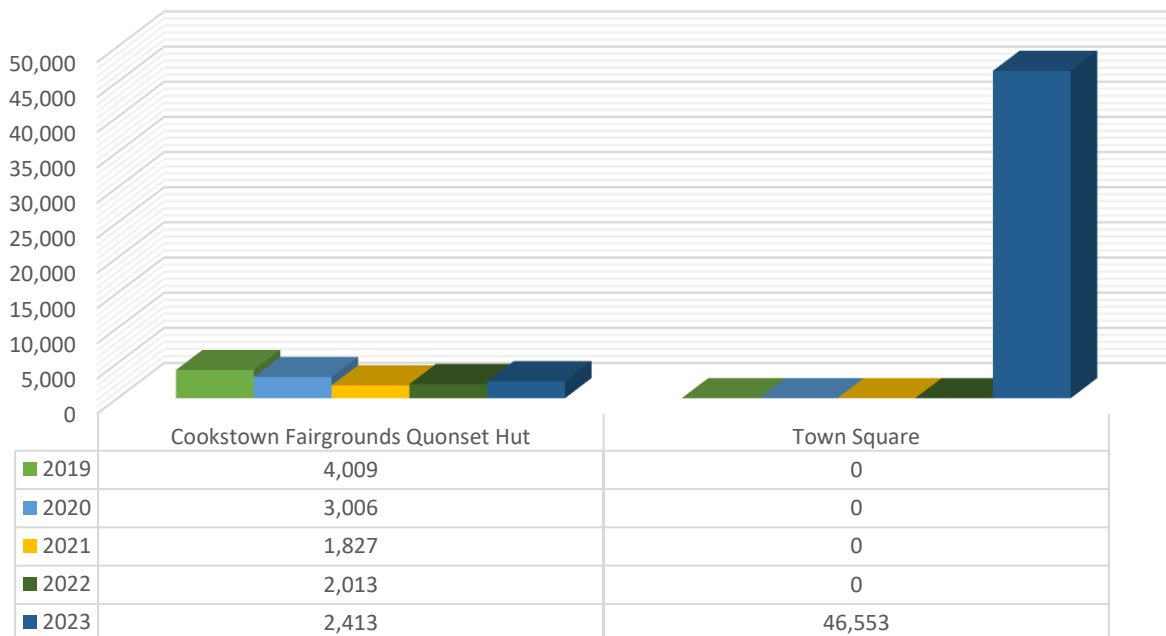
Community & Culture (Other) Gas Usage (m3)



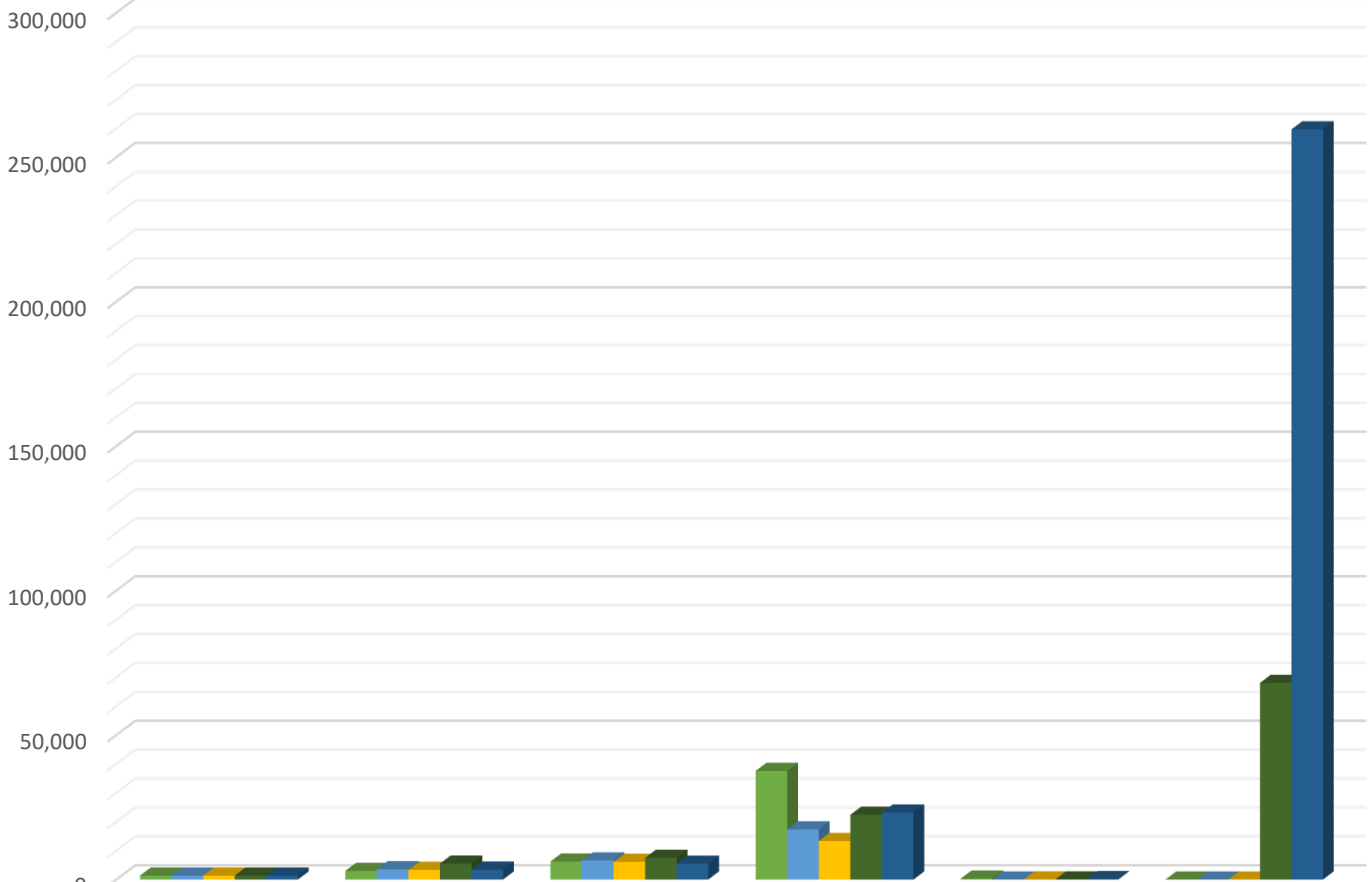
Park Outbuildings (Innisfil Beach Park) Hydro Usage (kWh)



Parks Outbuildings (Other) Gas Usage (m3)

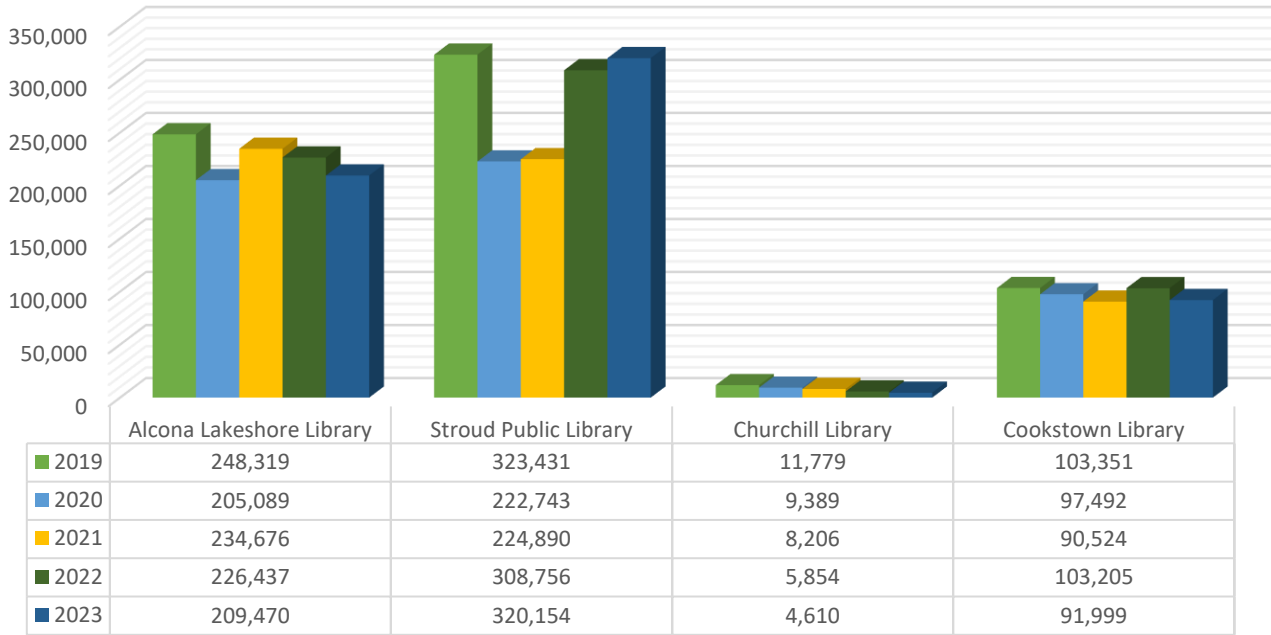


Park Outbuildings (Other) Hydro Usage (kWh)

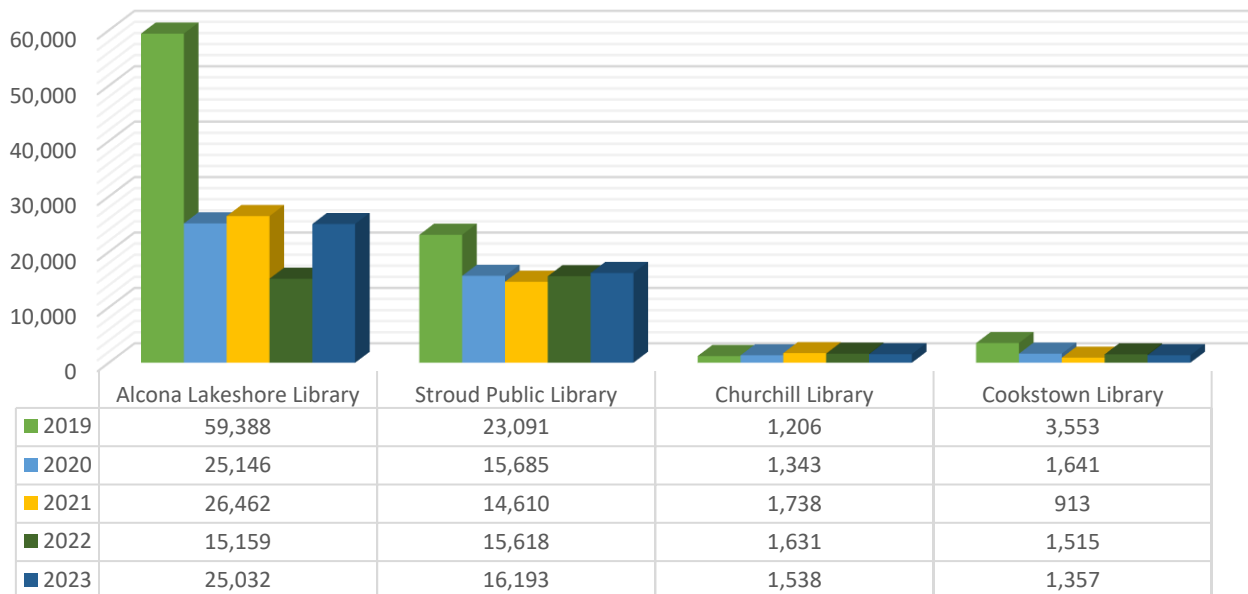


Year	Cookstown Fairgrounds Quonset Hut	Cookstown Fairgrounds Splash pad and building	Cookstown Rink Refrigeration Room	Centennial Park Washroom (Snackbar/Camp)	Gilford Arboretum Garage	Town Square
2019	1,368	2,995	6,219	37,564	326	0
2020	1,368	3,536	6,578	17,347	0	0
2021	1,368	3,343	6,126	13,315	7	0
2022	1,368	5,520	7,523	22,404	33	68,036
2023	1,368	3,429	5,452	23,180	149	259,630

Innisfil Libraries Hydro Usage (kWh)



Innisfil Libraries Gas Usage (m3)



Appendix C

References

- **Town of Innisfil Community Strategic Plan 2030:**
[Strategic Plan - Town of Innisfil](#)
- **Town of Innisfil Energy Consumption and Greenhouse Gas Emissions:**
[Energy Consumption and Greenhouse Gas Emissions - Town of Innisfil](#)
- **Ontario Regulation 25/23:**
[O. Reg. 25/23: BROADER PUBLIC SECTOR: ENERGY REPORTING AND CONSERVATION AND DEMAND MANAGEMENT PLANS \(ontario.ca\)](#)