TOWN OF ST. MARYS

Conservation & Demand Management Plan

2024-2028

ONTARIO CANADA
ST. MARYS

Disclaimer: This document has been prepared by the Ontario Clean Water Agency on behalf of the Town of St. Marys in accordance with Ontario Regulation 25/23 under the Electricity Act, 1998 for submission to the Ministry of Energy, Northern Development and Mines. This Plan is constantly evolving and may be revised to reflect the most current information and circumstances. The Town of St. Marys, its council, directors, officers, shareholders or representatives do not accept any liability whatsoever by reason of, or in connection with, any information in this document or any actual or purported reliance on it by any person. The Town of St. Marys may update any information in this document at any time.

For any questions related to this Plan, please contact Kerry Tuyen, Director – Innovation, Technology and Alternate Delivery, KTuyen@ocwa.com.

Contents

Background on O. Reg. 507/18

O. Reg. 507/18 was created under the Electricity Act, 1998 on December 12, 2018. It was filed on December 14, 2018 and Published on e-laws the same day. This Ontario Regulation was developed to replace the revoked O. Reg. 397/11, which was filed under the repealed Green Energy Act, 2009.

This Ontario Regulation requires that every municipality, municipality service board, post-secondary education institution, public hospital and school board (public agencies), update their previous Conservation and Demand Management Plans by July 1, 2019, and update it every five years afterwards.

The Conservation and Demand Management (CDM) plans should include two sections. The first section should discuss the public agency's annual energy consumption and the emissions associated with their operations. The second section must provide a description of previous, current and proposed ways to conserve or reduce energy that is used by the operations of the public agency. This, in turn, assists in the management of the public agency's demand for energy, and will forecast the results of current and proposed measures.

Validity Period

This report is valid between the dates of January 1, 2024 – December 31, 2028. According to O.Reg. 507/18, it will need to be updated before or on December 31, 2028.

Commitment

Declaration

The Council for the Town of St. Marys (Town) is committed in allocating necessary resources to develop and implement a five-year Energy CDM Plan as required under Regulation 507/18 of the Electricity Act. The Energy CDM Plan will strive to reduce our energy consumption and its related environmental impact as outlined in our overall target. Council and Staff will monitor continuous progress towards the objectives set in this plan and will update as required under Regulation 507/18 of the Electricity Act or any subsequent legislation.

Vision

The Town will strive to continually reduce its total energy consumption and associated greenhouse gases through the integration of energy efficient infrastructures and facilities, operational efficiencies, and building the foundation for a culture of energy awareness and knowledge within the municipality.

Policy

The Town will endeavor to incorporate energy efficiency into all areas of our activity including our organizational and human resources management procedures, procurement practices, and facility operations and maintenance. As a major component of the operating cost of municipal facilities and equipment, energy cost will be factored into the lifecycle cost analysis and asset management analyses and policies of the municipality. All departments have clear links to some or all of the goals and objectives of the Energy CDM Plan.

Goals

The Town's Energy CDM Plan will help achieve the following goals:

1. Maximize fiscal resources and avoid cost increases through direct and indirect energy savings
2. Reduce the environmental impact of the municipality's operations
3. Increase the comfort and safety of staff and patrons of the municipal facilities
4. Promote a culture of energy conservation within the municipality

Target

The Town's total energy consumption for 2023 was 4,583 MWh of electricity, and 393,000 m^3 of natural gas. As per the previous CDM Plan, the Town's population target growth rate was 1.5%. For the next CDM Plan period (2024-2025), this target growth rate continues to be 1.5%. Population growth will inherently lead to an increase in energy use for municipal facilities. Through this CDM plan, the Town aims to hold to the same total annual electricity consumption as in the 2023 reference year. The Town plans to focus on the hydro consumption rather than the natural gas. The Town will continue to use natural gas for heating of its facilities, which is already at its lowest achievable consumption.

Objectives

In order to achieve the target of maintaining the same 2023 electricity consumption for the next CDM Plan timeframe, the following objectives are considered:

1. Ensure energy efficiency consistently across municipal facilities
2. Monitor and report on energy consumption at regular intervals. Staff will monitor and verify simple payback (years) to enable reinvestment in energy projects and report on energy consumption on a semi-annual basis
3. Better analyze energy costs and look for savings opportunities. This will include looking at energy commodity procurement options and taking advantage of all available resources and funding for energy projects
4. Raise Council and Staff awareness around energy efficiency. This will include communicating successes to both internal and external stakeholders
5. Strengthen partnerships with external stakeholders such as utility providers for both electricity and natural gas
6. Identify and seize renewable energy generation opportunities

Organizational Understanding

Summary of Energy Consumption

The Town's electricity consumption (sixteen facilities) was reduced significantly, by 15.8%, from the baseline year of 2018 to 2023. Natural gas usage (ten facilities) in 2023 increased by only 13.9% vs 2018.

There were no other types of energy sources used by the Town.

Renewable Energy Utilized

The Town aspires to show leadership in the promotion and development of renewable energy systems that are compatible with our asset management and land use planning objectives:

1. We encourage a de-lamping campaign by asking employees to identify opportunities to reduce lighting
2. Installed occupancy sensors in all rooms
3. Ensured computer monitor power software is enabled
4. Facility and Operational staff, trained on proper operation of BAS Climate Control Systems

Stakeholder Needs

Stakeholders will need the following:

1. A CDMplan with a clear vision, goals and targets to effectively communicate the corporate efficiency commitment
2. Accurate, annual reports to maintain awareness and keep track of progress against targeted reductions of energy consumption
3. Training and support to improve upon the skills and knowledge needed to implement energy management measures and best practices

Resources Planning

Each facility and the facility managers will be responsible for administration and implementation of the CDM Plan.

All employees use energy in daily work activities, therefore it is imperative that all municipal staff be aware of their personal energy consumption and reduction methods. Staff training and energy management tools will assist in showcasing efforts for reduction. To ensure that staff continue their efforts for energy reduction, it is crucial to engage staff in an effective education program. All staff should be knowledgeable in energy efficient measures, where possible.

Municipally Owned Operations

Building Name	Address	Operation Type
St. Marys Water Pollution Control Plant	309 Thomas Street, St. Marys	Facilities related to the treatment of sewage
Municipal Operations Centre	408 James St S., St. Marys	Administrative offices and related facilities, including municipal meeting room
Cemetery	150 Cain St, St. Marys	Administrative offices and related facilities.
Fire Hall	172 James St S., St. Marys	Fire stations and associated offices and facilities
St. Marys Museum	177 Church St S., St. Marys	Cultural facilities
Town Hall	175 Queen St E., St. Marys	Administrative offices and related facilities, including municipal council chambers
Lind Sportsplex	425 Water St S., St. Marys	Community centres
St. Marys Public Library	15 Church St N., St. Marys	Public libraries
Via Rail	5 James St N., St. Marys	Administrative offices and related facilities,
Pyramid Recreation Centre	317 James St S., St. Marys	Indoor recreational facilities
Queen Street East SPS	728 Queen Street East	Facilities related to the treatment of sewage
Robinson Street SPS	110 Robinson Street (listed as 0 Widder St W)	Facilities related to the treatment of sewage
Emily Street SPS	Emily Street	Facilities related to the treatment of sewage

Well 2A	20 Wellington Street North	Facilities related to the treatment of water
Reservoir and Booster St.	55 St. George Street North	Facilities related to the treatment of water
Well 3	209 Thomas Street	Facilities related to the treatment of water

Total Consumption 2023

Type of Energy Source	Consumed by Municipality?	Supplier	Unit of Measurement	Total Energy
Electricity (Hydro)	Yes	Festival Hydro	Kilowatt Hour (kWh)	4,583,158
Natural Gas	Yes	Enbridge	Cubic Meter (M^3)	393,036

Facility Consumption 2023

Common Facility Name	Electricity (Hydro)		Natural Gas	
	kWh	%	M^3	%
St. Marys Water Pollution Control Plant	1,823,145	40%	8,400	2.1%
Municipal Operations Centre	172,257	3.8%	40,096	10.2%
Cemetery	11,935	0.26%	1,430	0.36%
Fire Hall	66,618	1.5%	9,818	2.5%
St. Mary's Museum	37,846	0.8%	7,008	1.8%
Town Hall	46,715	1.0%	11,399	2.9%
Lind Sportsplex	179,118	3.9%	23,327	5.9%
St. Marys Public Library	12,723	0.28%	4,184	1.1%
Via Rail Station	12,723	0.28%	6,099	1.6%
Pyramid Recreation Centre	1,578,090	34%	281,275	72%
Queen Street East SPS	22,182	0.48%	-	-
Robinson Street SPS	13,101	0.29%	-	-
Emily Street SPS	9,073	0.20%	-	-
Well 2A	154,358	3.4%	-	-
Reservoir and Booster Station	264,807	5.8%	-	-
Well 3	178,467	3.9%	-	-
TOTAL	**4,584,765**	**100%**	**393,036**	**100%**

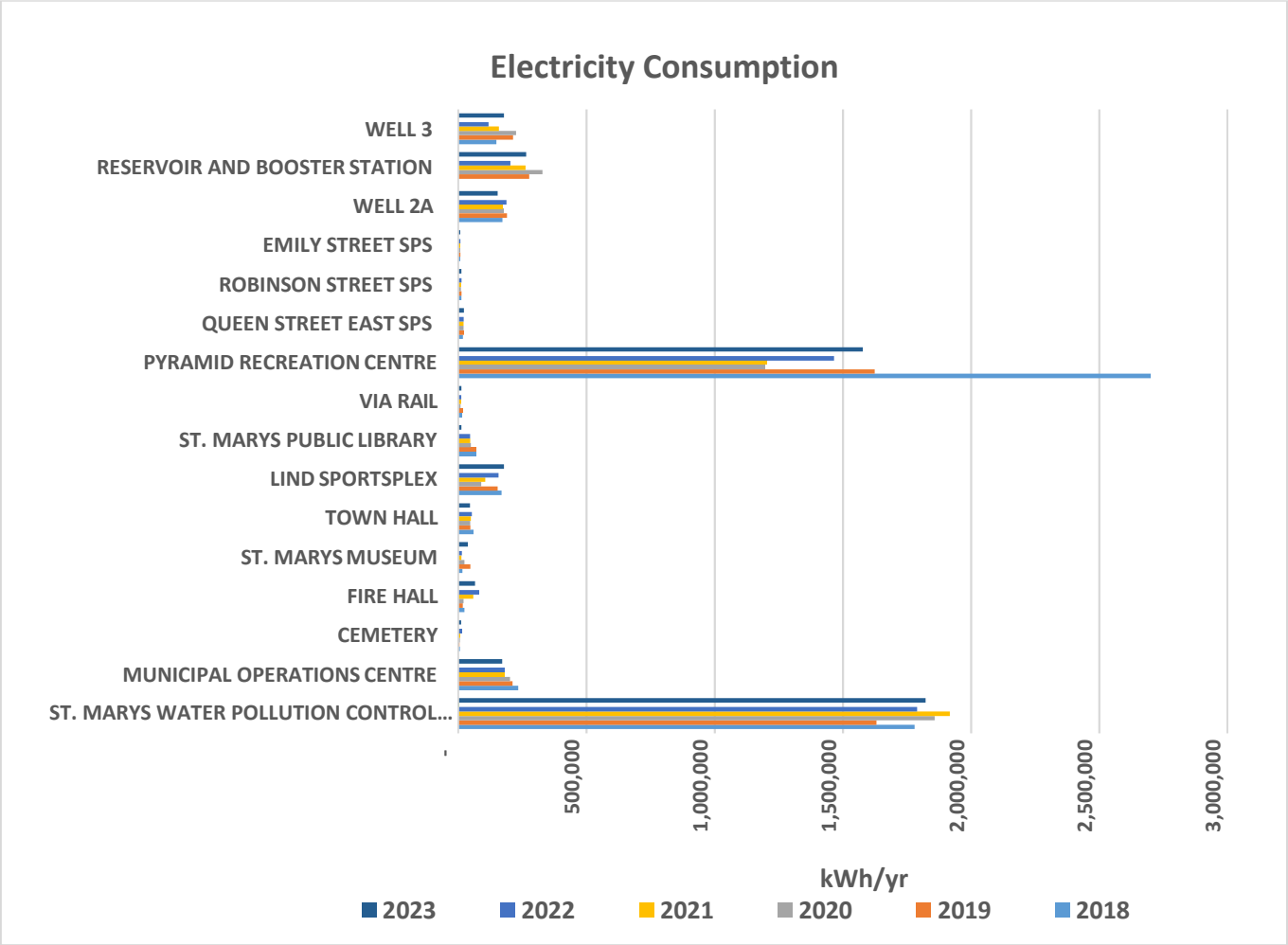
Energy Consumption 2018-2023

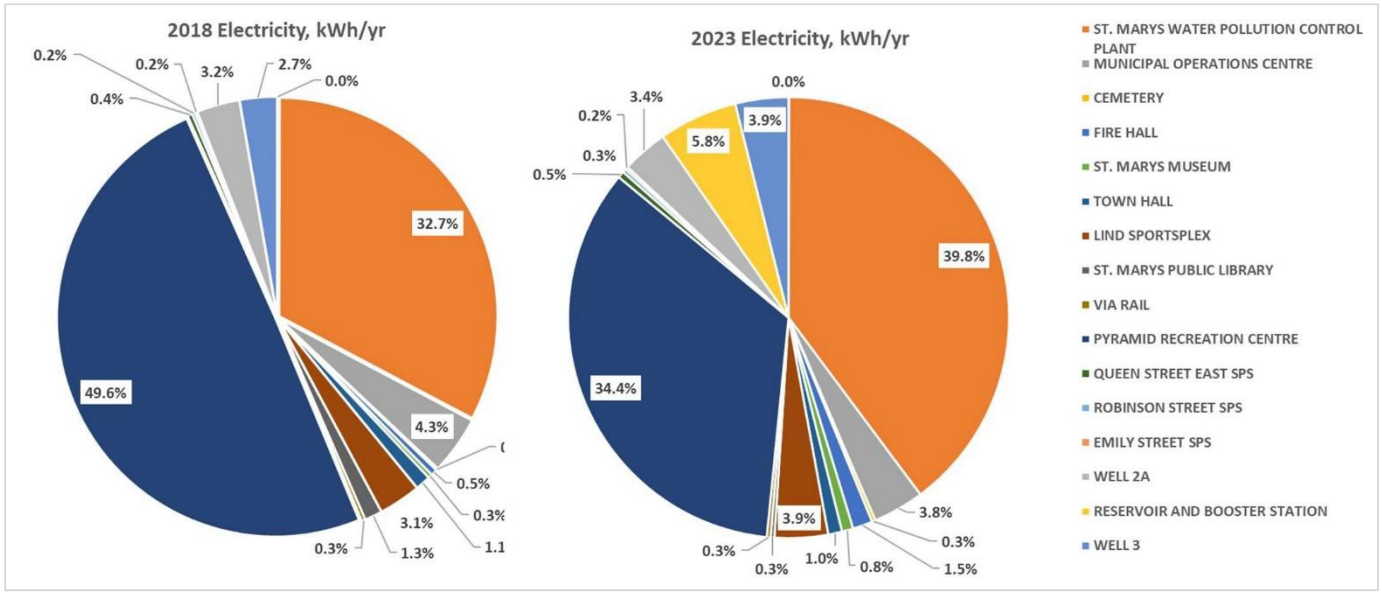
Covid restrictions have created abrupt and unforeseen changes to economic conditions, including energy use, across Canada. COVID-19 disrupted many businesses, resulting in reduced provincial demand/consumption. Industrial and Commercial consumption were drastically reduced due to the closure of many factories and industries. Residential and household demand experienced some increase because of the stay-at-home rule that was employed to manage social distancing concept for the COVID-19 period.

In terms of electricity use, most municipalities and towns experienced lower electricity use at Community centers, pools, arenas and libraries. Covid also affected natural gas; the impact ranged from moderate to significant. Some saw a decline in sales which meant that they did not require as many workers and/or shifts to be operating. This was due to plant shutdowns and decreased demand from their customers, primarily in the automotive or construction industries. There was a

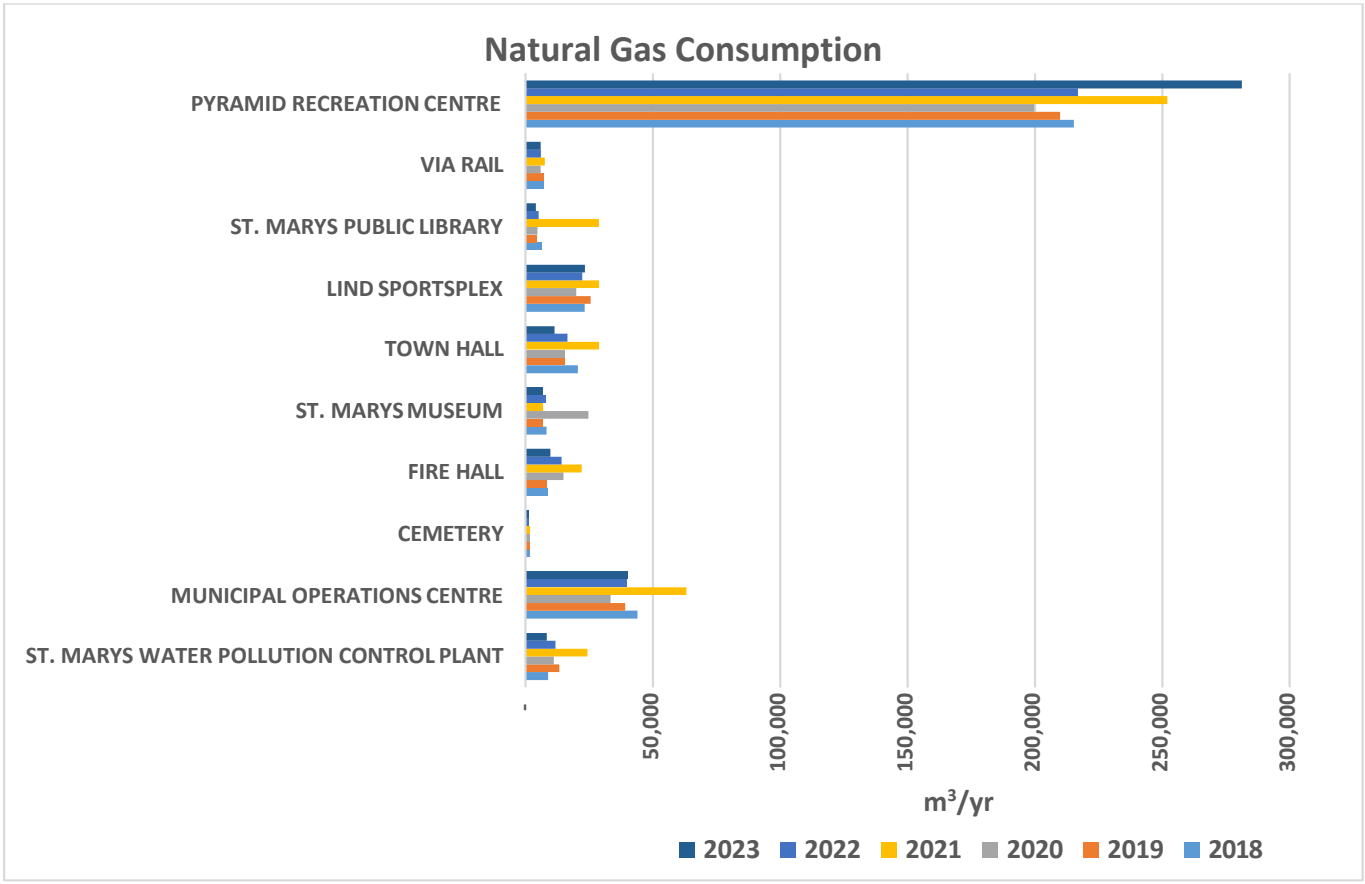
reduction in energy use, as a result of decreased operations. Most of the Town's facilities were also affected by Covid restrictions.

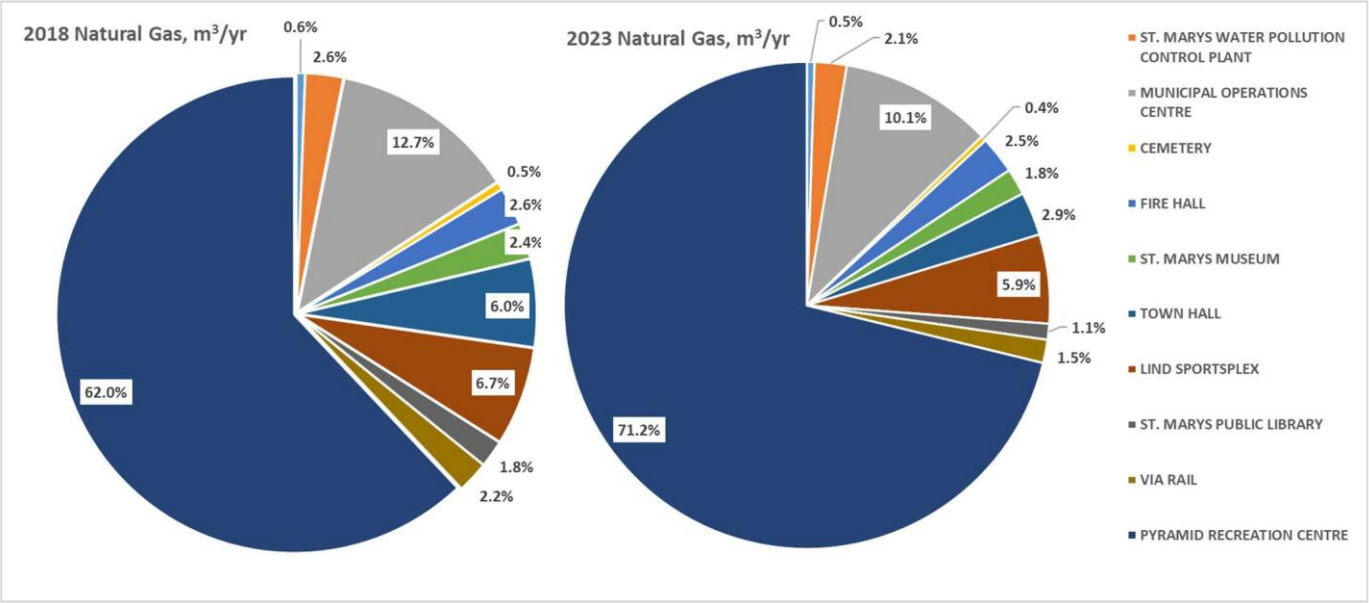
The Pyramid Recreation Centre was the main contributor to the electricity savings, as shown in the two electricity usage charts below (1,123,367 kWh savings vs 2018 baseline). In 2018, the Centre alone used half of all electricity, which dropped to about 1/3rd by 2023; this represents a 42% reduction.





Regarding natural gas, the Pyramid Recreation Centre experienced the largest increase in usage. The Centre increased its 2023 consumption by 65,958 m^3 vs 2018; this represents a 31% increase. Most of the other facilities reduced their 2023 gas usage, which helped offset some of this large increase. Additional details are presented in the two natural gas charts below.





Upcoming improvements to HVAC systems at some facilities are expected to further reduce annual natural gas consumption, but it will not be significant in comparison to the hydro reduction.

The electricity and natural gas consumption charts are shown, at a larger scale, in Appendix A.

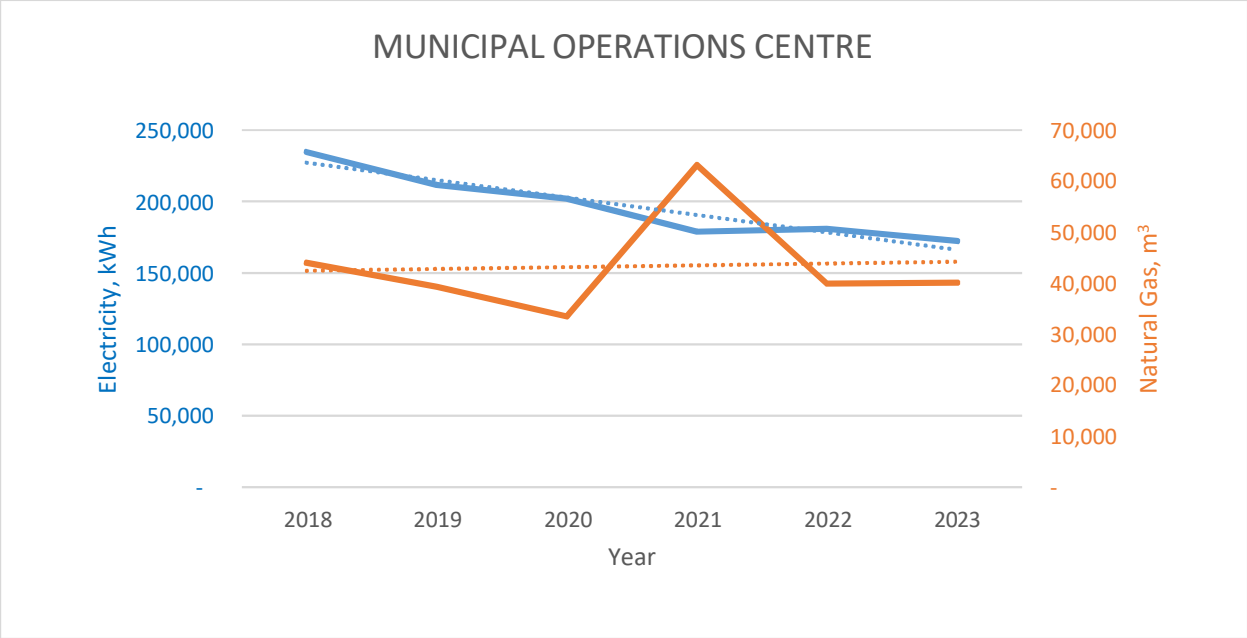
Municipal Operations Centre

The Municipal Operations Centre's electricity use decreased by approximately 62,313 kWh from the 2018 baseline, which is an approximate 27% reduction in consumption; the total consumption in 2023 was 172,257 kWh. Natural gas use in 2023 decreased from 43,952 m^3 in 2018 to 40,096 m^3 in 2023 (by 3,856 m^3, or an 8.8% decrease).

The MOC uses 3 boilers, 2 HVAC units with one HVAC pump, and has two Heat Pumps as well. The MOC uses an exhaust hood for welding.

Since 2014, there have been some improvements made, such as a ductless split replacement and new LED outdoor lighting. The building is still fairly new, so improvements have not been needed.

In 2022, the three boilers were replaced, and HVAC units 1 and 2 were replaced in 2024. In 2018, all exterior wall packs were upgraded to LED lights. The shop lights were also replaced with LED light fixtures in 2020. In 2022, all windows in the administration section of the building were replaced. Additionally, in 2023, the steel roof was repaired and coated with aluminum to help reduce heat loss and penetration.

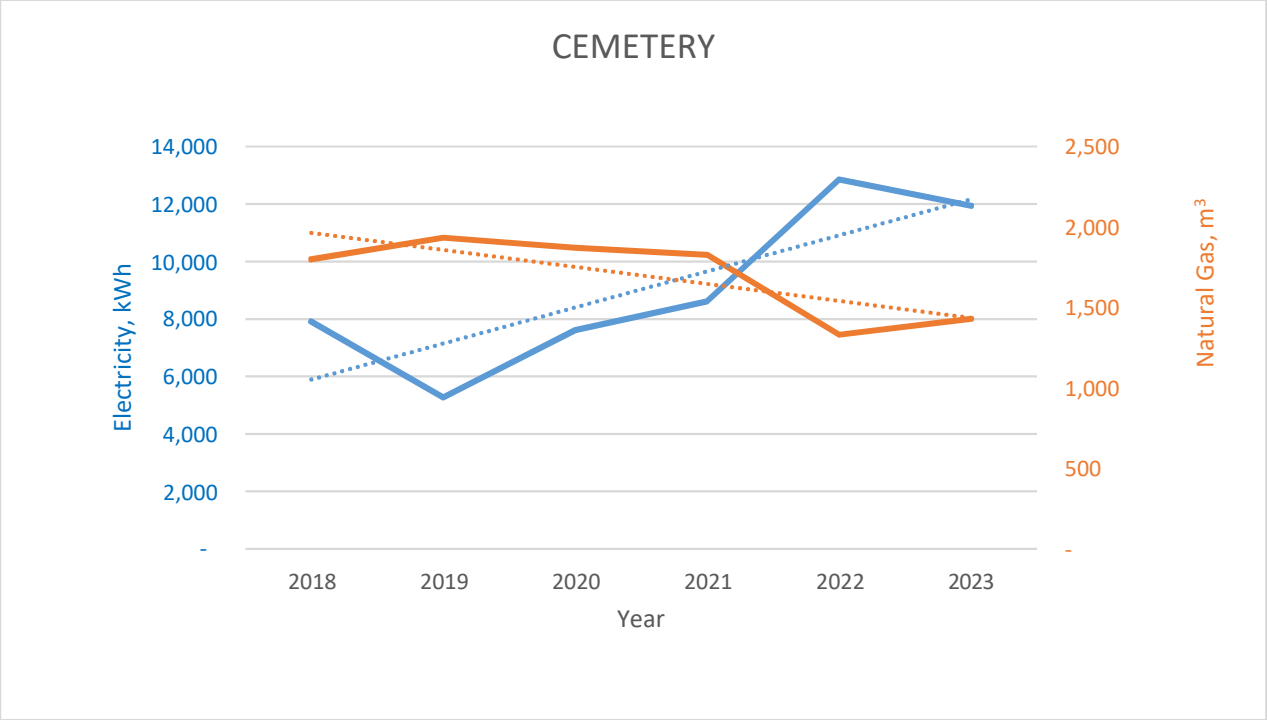


Cemetery

The cemetery office has increased its electricity consumption by approximately 4,032 kWh from the 2018 baseline year, which is an increase of 51% over a five-year period. However, natural gas use over the same period decreased by 369 m^3, or 21%.

The cemetery has two space heaters within the facility, one that runs on electricity and the other using gas.

In 2020, the building underwent a bathroom renovation which included the installation of two new baseboards. Additionally, a new AC unit was installed in 2014.

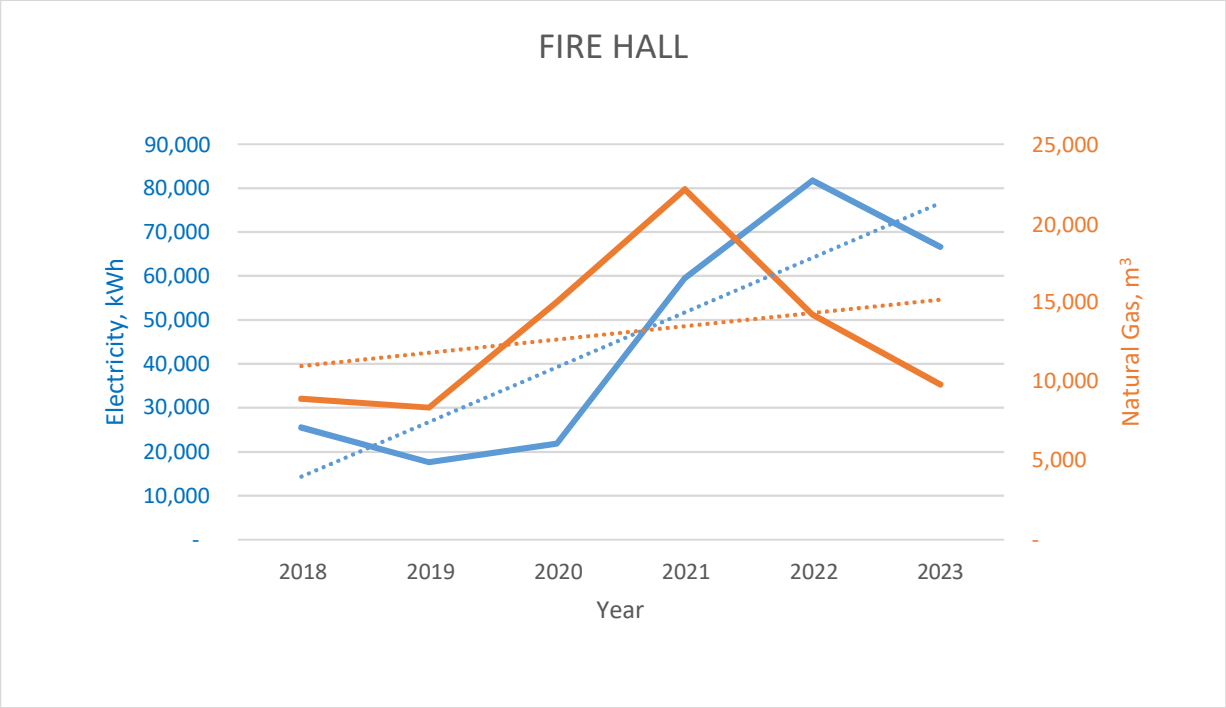


Fire Hall

Both electricity and natural gas use by the Fire Hall have increased since 2018; however, the recent trend shows significant reductions of energy use. The Fire Hall's electricity has increased by 41,123 kWh, which is approximately 161% higher than the 2018 baseline consumption. The hall consumed a total of 66,618 kWh in 2023; however, and starting 2022, it shows a downward trend. Natural gas use peaked in 2021, and then reverted towards the baseline. In 2023, it was only 917 m^3 (10.3%) higher than in 2018.

The fire hall uses radiant tube heaters to heat the bay, where the office space is heated using a boiler unit.

In 2021, the new Fire Hall was built. 2 new HVAC units installed heat operations and administrative sides of the hall. The truck bays are heated with gas powered radiant heat tubes. 2 split units cool the offices and dispatch office.



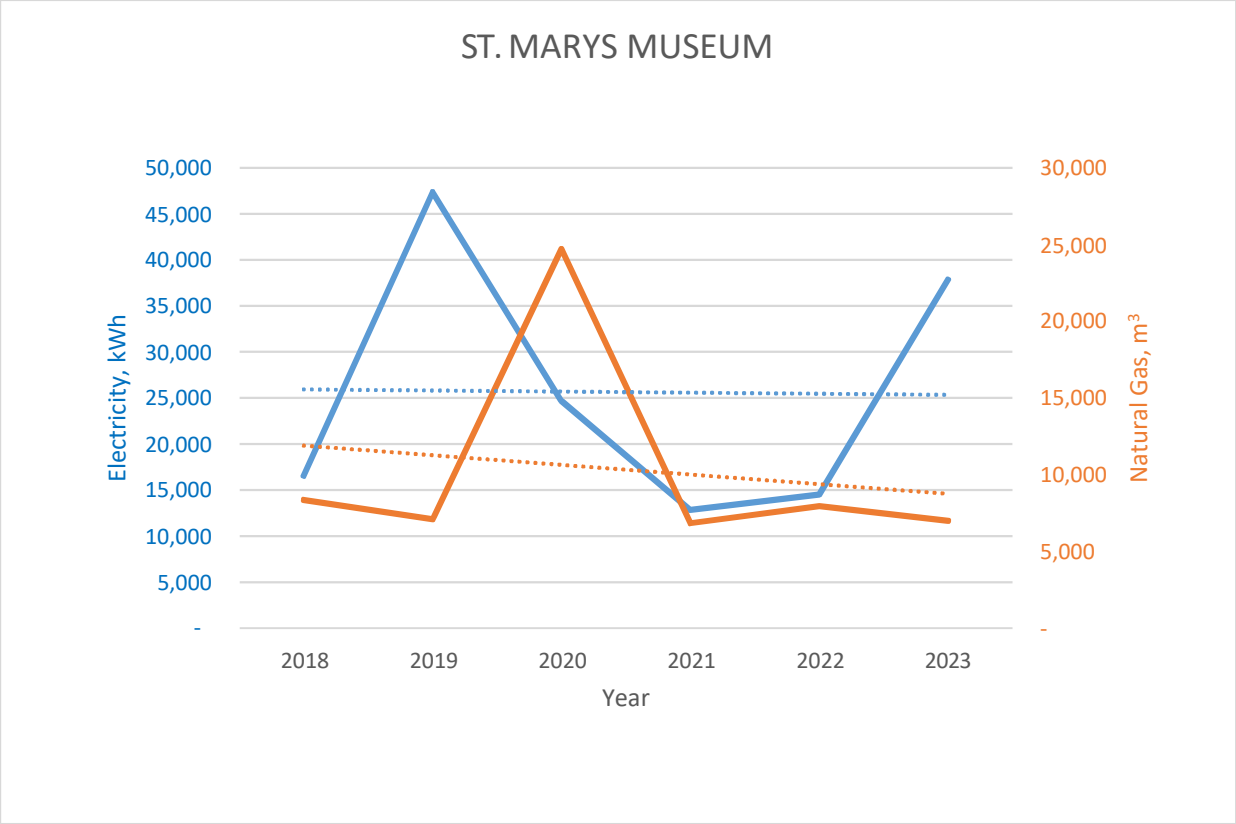
St. Marys Museum

The Museum has also been affected by Covid, due to closure. Electricity use in 2023 is significantly above the baseline year, by 21,263 kWh, which is an 128% decrease from 2018's consumption. In contrast, natural gas consumption decreased in 2023 by 1,344 m^3, or 16%, vs 2018.

The museum has electric baseboard heaters installed, as well as two furnace units and three A/C units to help regulate the temperature of the building.

At the museum, there have been a few upgrades done, which include projects such as a furnace replacement and new LED upgrades to the interior.

In 2016, the house furnace was replaced, and in 2018, all wallpack lighting was upgraded to LED fixtures. The hot water tank was replaced in 2019, and in 2021, the track lighting in the barn was also updated to new LED fixtures.



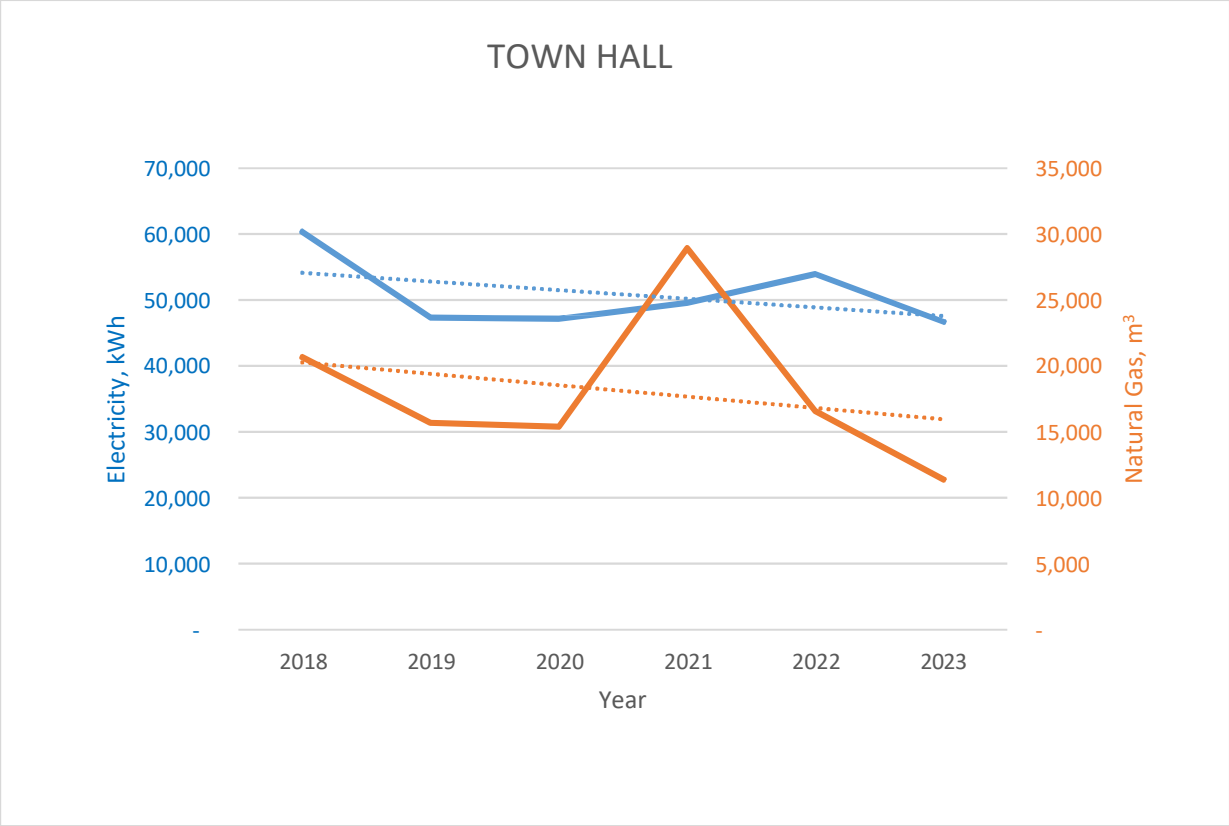
Town Hall

The Town Hall has reduced its electricity consumption by 13,618 kWh, or about 23% compared to 2018's consumption. The 2023's electricity usage was about 46,715 kwh. Natural gas use also decreased, by 1,344 m^3 (16% decrease).

The town hall uses two Dietrich boilers, a condensing unit, two pumps, and has a total of six different carrier units. The Town Hall does also operate an elevator to ensure accessibility standards are met.

The town hall has had a few upgrades added to it since 2014, such as window replacements, a new HVAC unit, and more insulation was added to the roof to reduce heat loss.

In 2013, Dietrich boilers were installed along with basement HVAC units and one furnace, with an IVU control system. In 2017, all windows were replaced, and in 2024, two HVAC units on the first floor were replaced. Additionally, LED lighting was installed in the basement in 2021 and on the first floor in 2024. A new slate roof was installed on the building in 2023.



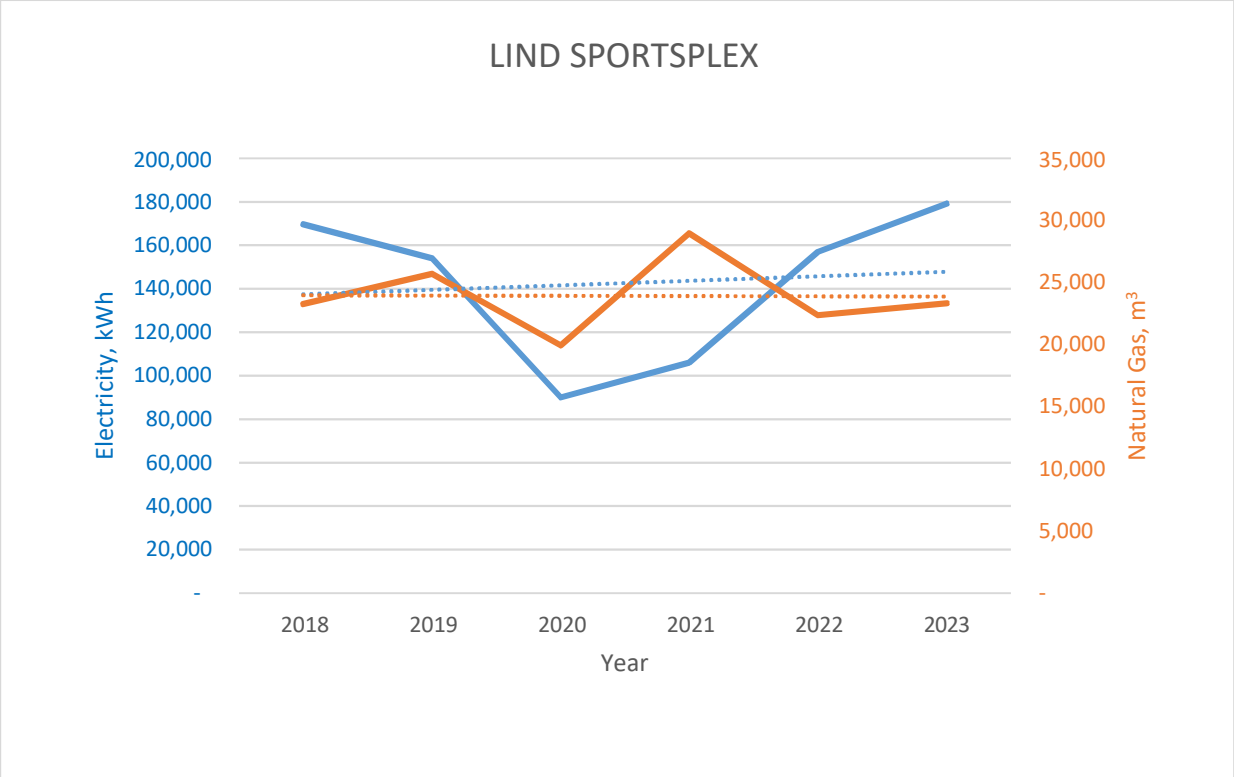
Lind Sportsplex

The Sportsplex is the Curling and Quarry facility, and has increased its consumption of electricity (slightly) by 9,522 kWh, or 5.2% since 2018. The total energy consumption for the Sportsplex in 2023 was about 179,118 kWh. As about natural gas, its use in 2023 (23,327 m^3) is almost the same as in 2018 (23,264 m^3).

The facility uses a single AC unit, and has two furnaces. To ensure that ice is produced and maintained, there is an Arctic Ice Compressor, two pumps, as well as a cooling tower installed. The washrooms use exhaust fans. The Sportsplex uses a dehumidifier and a unit heater, as well. The facility has a lift installed.

The Lind Sportsplex has had a roof replacement, and new outdoor LED lighting has been installed.

The Lind Sportsplex has undergone numerous capital upgrades over the years to enhance its facilities and improve energy efficiency. In 2017, the roof was repaired and an aluminum coating was applied, with additional repairs and reapplication of the coating performed in 2021. The AC unit was replaced in 2021, and exterior windows were updated in 2022. The Sportsplex saw the replacement of its two furnaces in 2023, alongside the installation of a new water heater back in 2017. All washroom fixtures were updated in 2019, and the lighting system has seen multiple upgrades with ice lights being replaced with LED fixtures in 2014 and then again with newer LED fixtures in 2022. Wall pack light fixtures were also replaced with LED fixtures in 2018, and the canteen exhaust fan was upgraded in 2023.

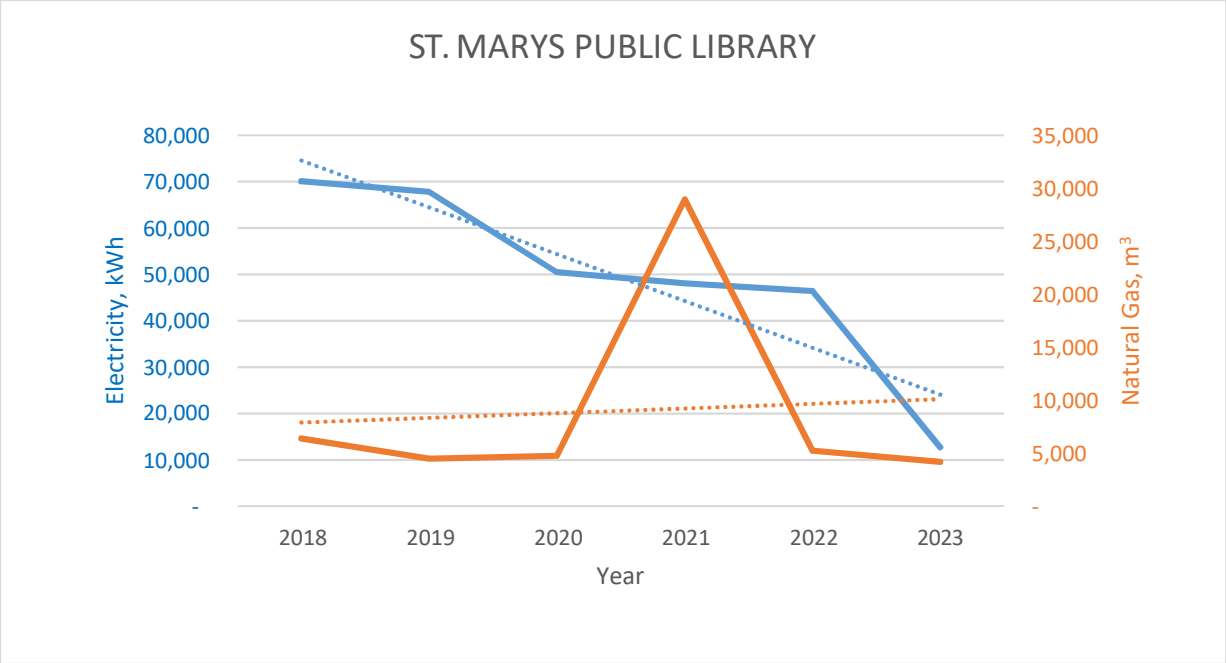


St. Marys Public Library

The Public Library has reduced its electricity consumption massively, by 57,342 kWh, which equates to a 82% decrease in energy consumption compared to its 2018 consumption baseline. The total consumption for 2023, was 12,723 kWh. Natural gas use also decreased, but only by 2,194 m^3 (34%).

The library uses Lennox cooling and heating units and a variable-speed multi-position air handler, which help to regulate the temperature and humidity levels within the library.

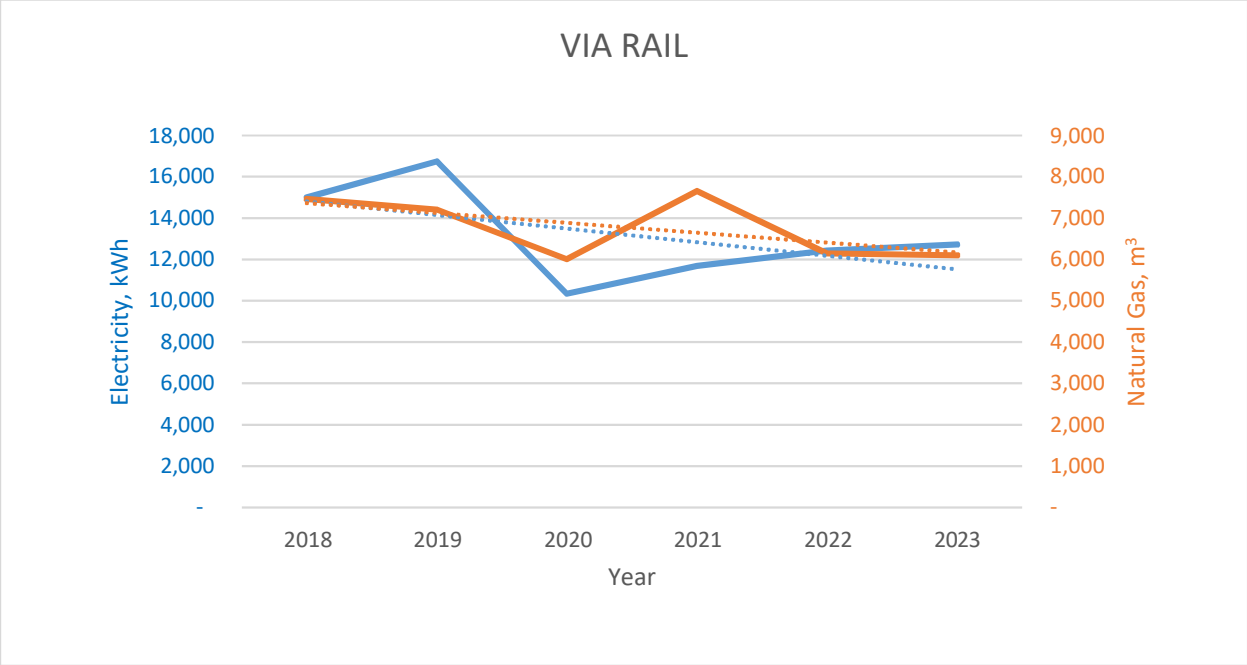
The public library has had a few upgrades added to it since 2014. These include projects such as a roof replacement, window replacement, a new HVAC unit has been installed and the outdoor lighting has been replaced with LED lighting.



Via Rail

The Via Rail Station has reduced its electricity and natural gas use in 2023, from their 2018 consumption, as follows: electricity by 2,283 kWh (15% reduction) and natural gas by 1,364 m^3 (18% reduction). In 2023, Via Rail used 12,723 kWh of electricity and 6,099 m3 of natural gas.

The Via Rail Station is heated using a gas-fired water boiler installed in 2013. Additionally, in 2013, insulation was blown into the attic to improve energy efficiency. In 2019, the station also saw the installation of an EV charging station in the parking lot.



Pyramid Recreation Centre

The Recreation Facility has decreased its kWh consumption by a very significant 42%, with an electricity consumption decrease of 1,123,367 kWh from 2018. In 2018, the PRC consumed 2,701,457 kWh. This large reduction is the main reason for the Town's overall decrease in electricity use by 15.8% (2023 vs 2018).

Natural gas use, on the other hand, experienced a 31% increase in 2023 (vs baseline 2018). The PRC used an additional 65,958 m^3 of gas in 2023, for a total amount of 281,275 m^3. Similar to electricity use, PRC is the main contributor to Town's overall natural gas consumption increase of 13.9% vs 2018.

There are many energy consuming mechanical units within the PRC. The pool mechanical room, hosts many of these units which include the main circulation for the pool pump which is required to run continuously as per Public Health regulations in order to ensure proper water balance and filtration at all times. In 2018, the pool was converted from a salt chlorine-generation system, to an Ultra-Violet Light disinfection system, which has also reduced energy through the elimination of booster pumps as part of the old system. The spa was removed in 2019, marginally reducing energy use. Two hot water boilers responsible for pool water heat were replaced in 2021 for condensing boilers. There is also a large HVAC unit to maintain indoor air quality which uses a heat recovery system to add supplementary heat to the pool water from the discharge air supply, as well as plate and frame heat exchangers replaced in 2023 for the pool. The pool change room HVAC unit was replaced in 2021, resulting in some energy efficiency improvements through temperature controls software upgrades.

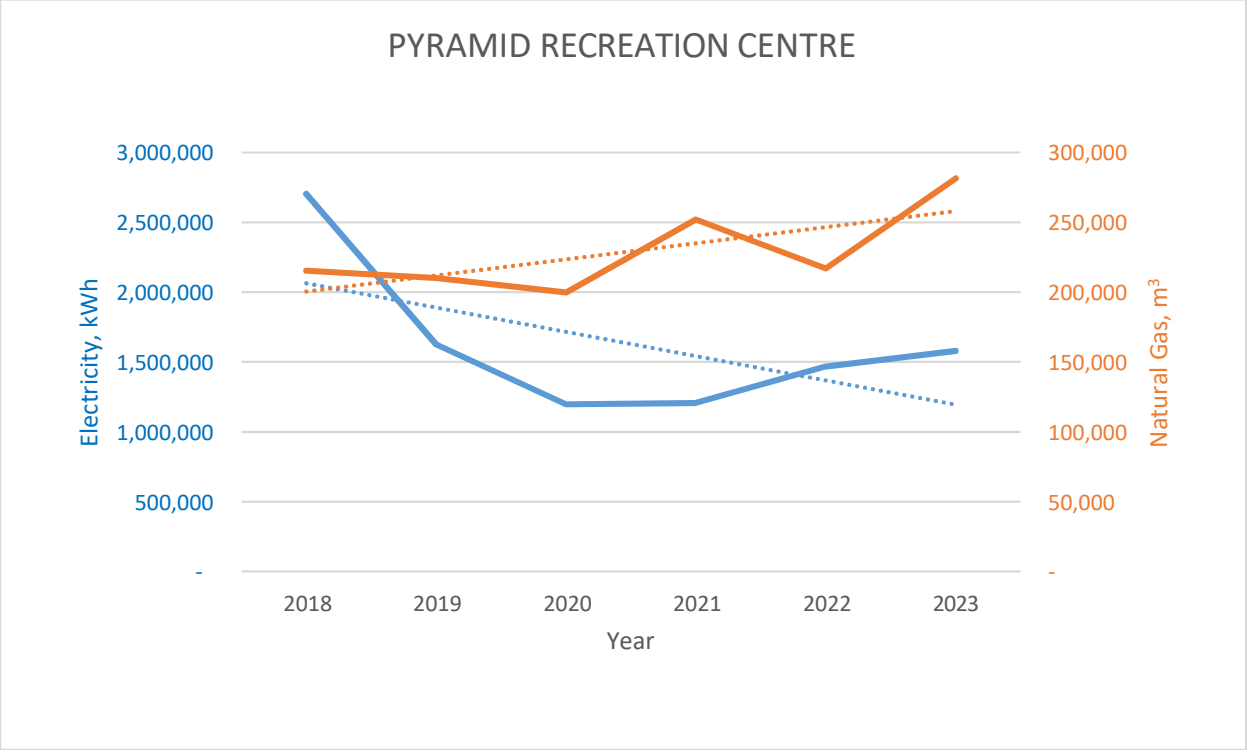
The refrigeration mechanical room hosts 18 mechanical units and is responsible for most of the electricity use at the PRC. The refrigeration room holds four Mycom compressors, a rooftop evaporative condenser, a condenser water treatment system, a low-pressure ammonia receiver, two plate and frame heat exchangers, a low side float expansion valve system, three rink glycol supply pumps, an underfloor heat exchanger, a Doucette heat recovery exchanger and two glycol expansion tanks. The primary refrigerant is ammonia, with a secondary refrigerant of ethylene glycol. There is also a CDI rooftop Dehumidification Unit to moderate the indoor air balance in both arenas, which uses a desiccant wheel for optimal energy efficiency. The wheel was replaced in 2022, in order to extend the lifespan of the unit for up to another 15 years.

The refrigeration and dehumidification systems are primarily used from early August through late May, which is the current typical ice operating season. Energy use at the PRC is greatly impacted by the determination of the yearly ice schedule, as this operation is the most energy dependant of all the aspects of the Centre.

The recreation facility also holds other general equipment which consumes a substantial amount of energy. These include, various hot water tanks and condensing heaters, a dishwasher, a kitchen hood system, two propane-fuelled Zamboni ice re-surfacers with laser-levelling systems, gas detection systems for propane and carbon monoxide, a Lennox furnace in the community centre, two battery powered auto-scrubbers, a battery powered ice edger, a Reverse Osmosis and hot water system for ice flooding, two Armstrong Circulation Pumps for the showers in the change rooms, two walk-in coolers, a walk-in freezer and an elevator.

There have been many upgrades added to the Pyramid Recreation Centre. These include various roof replacements resulting in better insulation values, upgrading to LED lighting throughout the entire Centre including exterior lighting as of 2021, and 11 of 12 HVAC units are less than 5 years old, with the one exception replaced in 2016. The refrigeration equipment has been upgraded to use a new software to regulate the usage. Variable Frequency Drives have been installed for the pool pump as well as other equipment when possible. A vestibule in the friendship centre has also been added to the building, which has helped with heat loss reduction.

Future plans may include completing an energy audit through the assistance of a grant to more thoroughly understand and reduce energy consumption. The PRC is also about to undertake a major renovation to the indoor pool with the addition of another HVAC unit as well as exhaust system to improve the indoor air quality as the existing equipment is not able to keep up. While this will protect the asset over the long term by reducing the relative humidity and increasing the ability to exhaust the necessary air, this will result in a net increase in utility consumption for this area. The new unit will come equipped with controls software variable frequency drives to assist with energy management. The shutdown period for this project is expected to take place from November 2024 through May 2025.

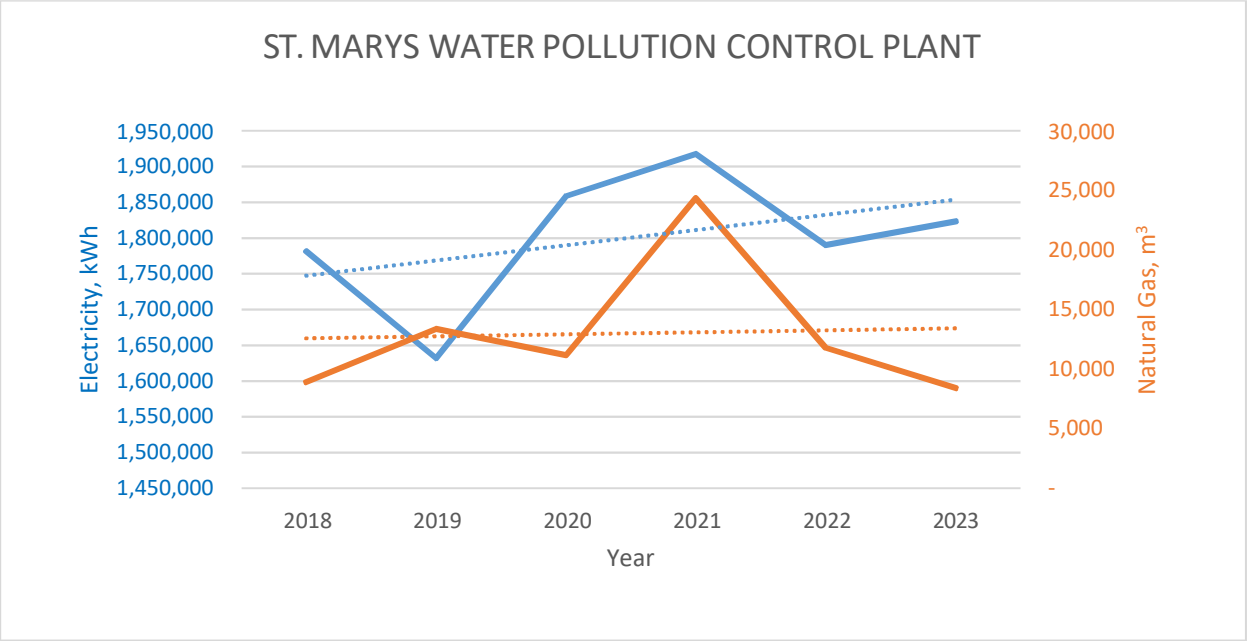


St. Marys Water Pollution Control Plant (WPCP)

The WPCP has increased its consumption very slightly compared to the 2018-baseline year. They have seen an increase of 42,063 kWh, or a minimal 2.4% increase. In 2018, the consumption of energy was approximately 1,781,082 kWh.

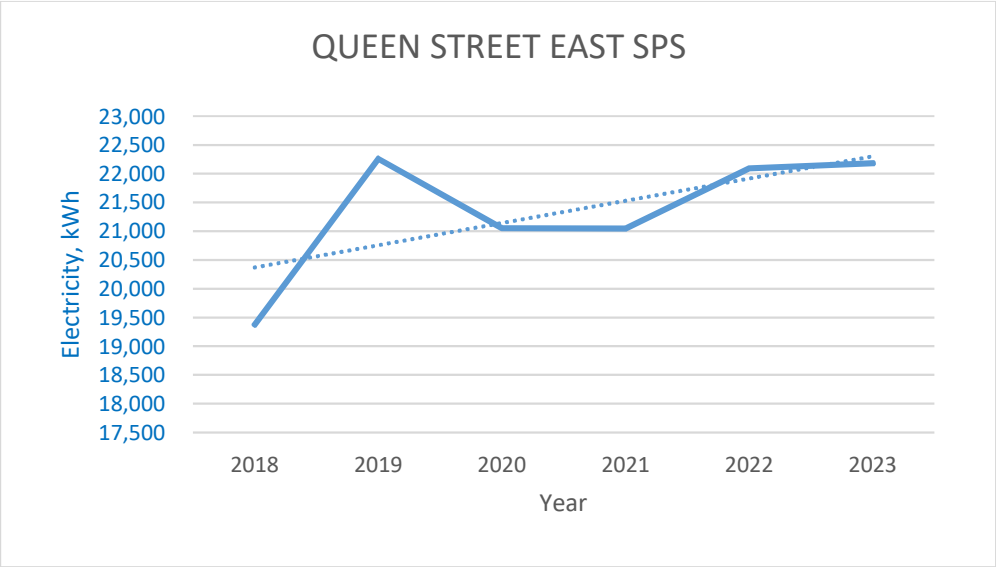
The WPCP has received a few upgrades and changes over the last few years, some of which include a new roof, the decommissioning of a methane gas compressor which used natural gas, and a switch to a high efficiency turbo blower. Recent improvements included replacement of a a Rotary Lobe pump, replacement of the biosolids loading pump in 2017, and replacement of all the RAS pumps since 2018. Also, 3 new raw sewage pumps were installed in 2023. The aeration piping replaced in late 2023 (by Nov) and saw a significant decrease in blower energy demand. In addition, the grit system was removed from service in 2024 and is currently being replaced. The plant is in process of replacing the aging admin building that used electric heat, and will be replaced by a natural gas HVAC system, new windows, etc. and should be significantly more energy efficient.

While not included in the regular inventory, other efficiencies are being implemented in the water treatment and storage facilities. The pumping station has a new reservoir and booster, and the next steps are for off-peak filling. The James St pumping station also has new insulation and new LED lighting installed.



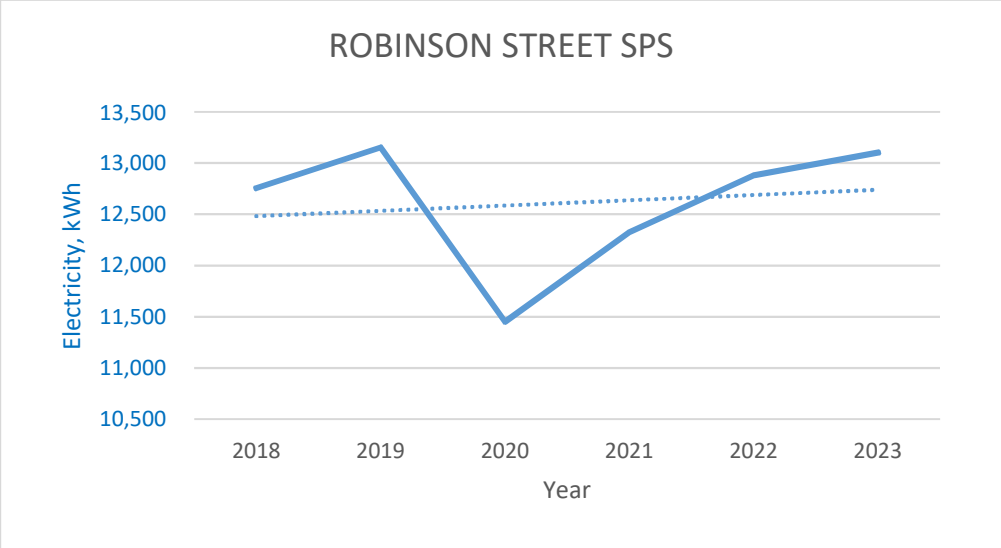
Queen Street East SPS

The SPS increased its consumption in 2023 by 2,806 kWh, or a 14% increase vs 2018. In 2018, the consumption of energy was approximately 19,376 kWh. There is no natural gas at the Queen Street East SPS.



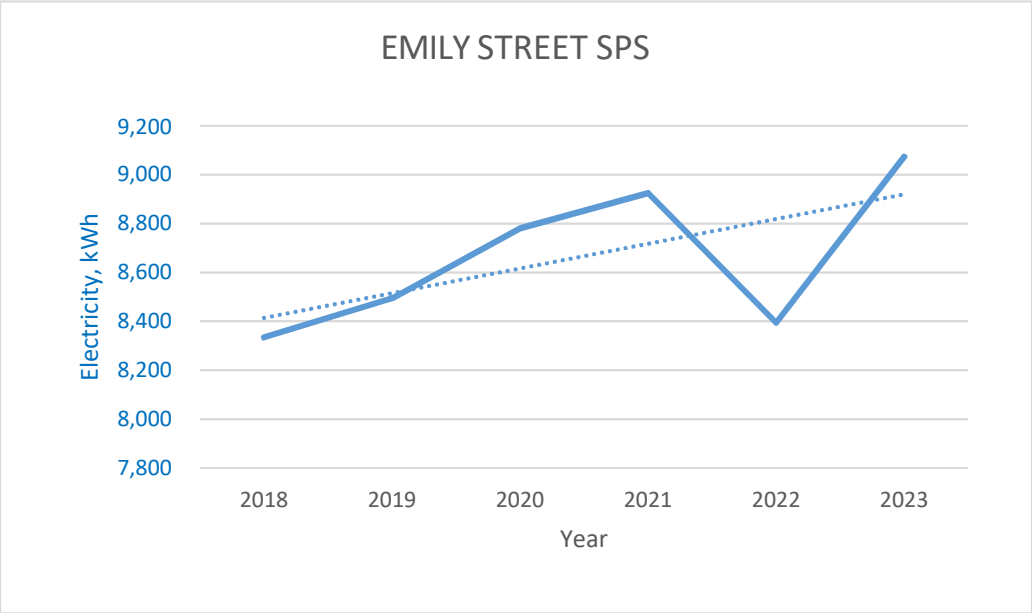
Robinson Street SPS

The Robinson Street SPS electricity usage remained almost the same, 2023 vs 2018. There was a marginal increase of 348 kWh (12,753 kWh in 2018; 13,101 in 2023), or 2.7% increase. Similar to the other SPS, there is no natural gas at this facility.



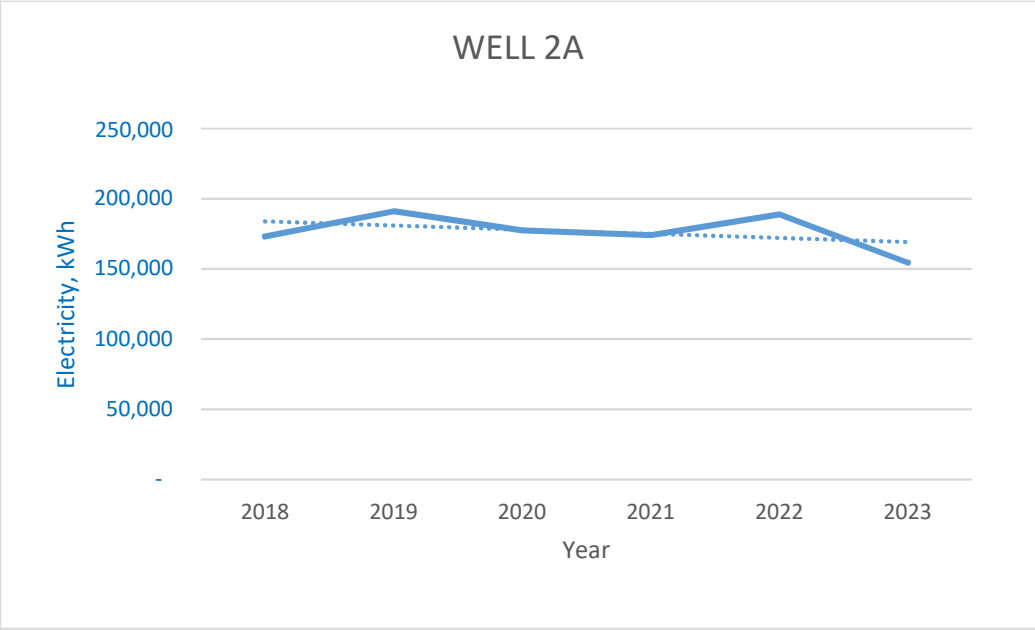
Emily Street SPS

The Emily Street SPS electricity usage increased by 8.9% in 2023 vs 2018. The increase amounted to 739 kWh (8,334 kWh in 2018; 9,073 in 2023). Similar to the other SPS, there is no natural gas at this facility.



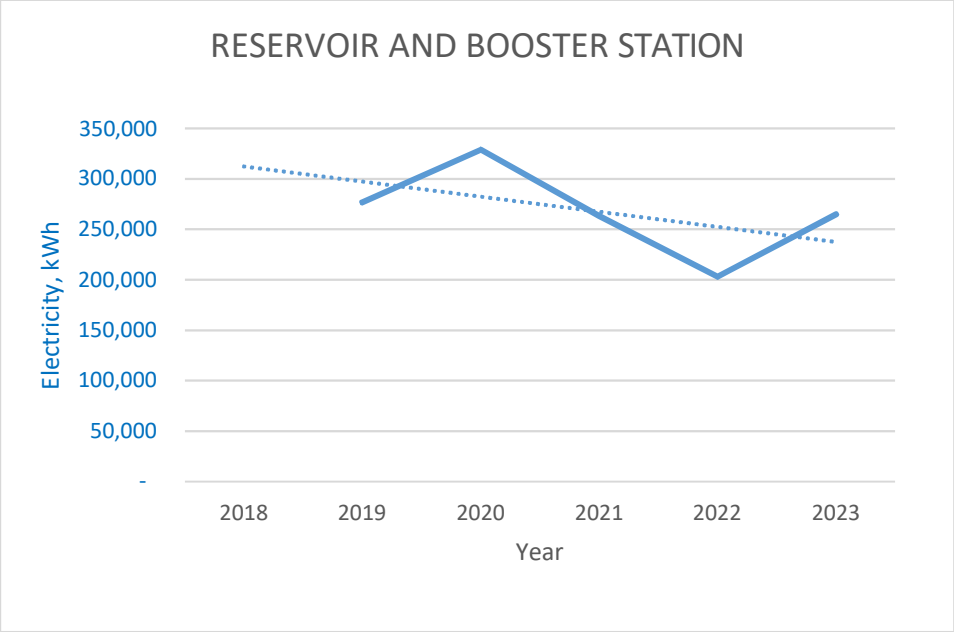
Well 2A

Well 2A experienced a noticeable decrease in electricity usage, 2023 vs 2018. The decrease amounted to 18,562 kWh or 11% (172,920 kWh in 2018; 154,358 kWh in 2023). There is no natural gas at Well 2A.



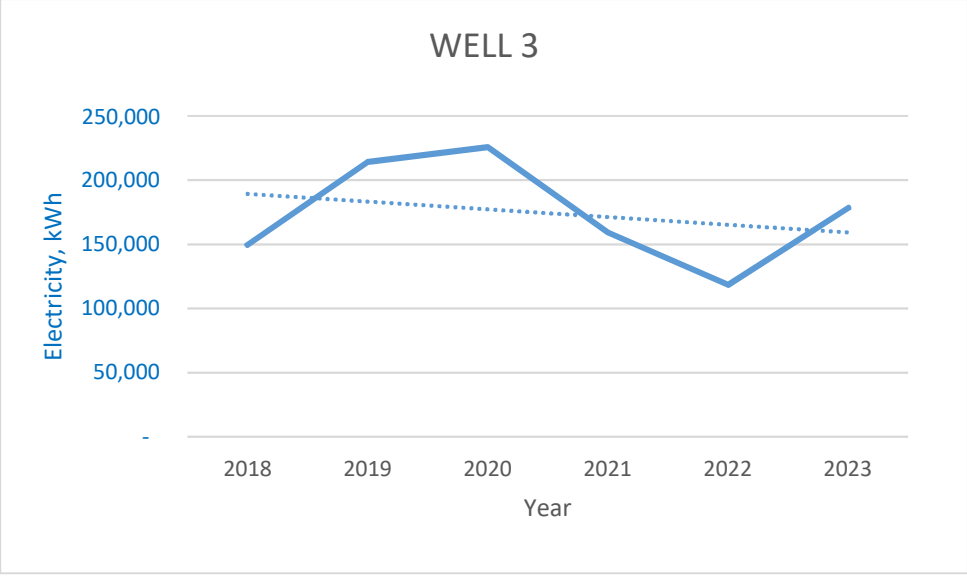
Reservoir and Booster Station

The Station's electricity consumption started in 2019. Due to its large consumption, it was included in the analysis as per available data. Using 2019 as baseline, the Station experienced a slight (4.3%) decrease in 2023 electricity consumption. The 2019 electricity usage was 276,692kWh, and it decreased to 264,807 kWh in 2023 (11,885 kWh decrease). The Station does not use natural gas.



Well 3

Well 3's electricity usage, 2023 vs 2018, increased by 19%. The increase amounted to 28,707 kWh, as the difference between 149,760 kWh in 2018 and 178,467 kWh in 2023. The well does not use natural gas.



Future plans

The Town consumes a significant amount of energy. The total energy consumption for 2023 was 4,583 MWh of electricity, and 393,000 m3 of natural gas. This plan will be used to focus on further reduction of electricity use and to aid in the implementation of impactful strategies, retrofit management, as well as monitoring and tracking consumption patterns. The Town will continue to use natural gas for heating of its facilities, which is already at its lowest achievable consumption.

The Town plans to focus on maintaining the significant electricity savings (-15.8%) achieved in 2023. As per the previous CDM Plan, the Town's population target growth rate was 1.5%. For the next CDM Plan period (2024-2025), this target growth rate continues to be 1.5%. Population growth will inherently lead to an increase in energy use for municipal facilities. Through this CDM plan, the Town will aim to hold to the same total annual electricity consumption as in the 2023 reference year.

The Town plans to focus on the hydro consumption rather than the natural gas consumption. The Town will continue to use natural gas for heating of its facilities, which is already at its lowest achievable consumption. Additional improvements to HVAC systems at some facilities are expected to further reduce natural gas consumption. Upcoming improvements to HVAC systems at several some facilities are expected to further reduce annual natural gas consumption, but it will not be significant in comparison to the hydro reduction.

Future energy plans and goals will be considered on a regular basis. The goals need to be established annually, along with the Council's approval of the municipal budget. All projects will have a Climate Action lens on it by calculating both the hydro reduction and the GHG emissions reduction associated with them. The Town will keep an inventory of all GHG emissions reduction associated with all energy reduction projects, to develop awareness around the Town's total carbon footprint.

The Town has plans to roll out LED lighting in all of their buildings, and have successfully installed them in most facilities. There are also plans to install motion sensor lighting to further reduce the energy consumption.

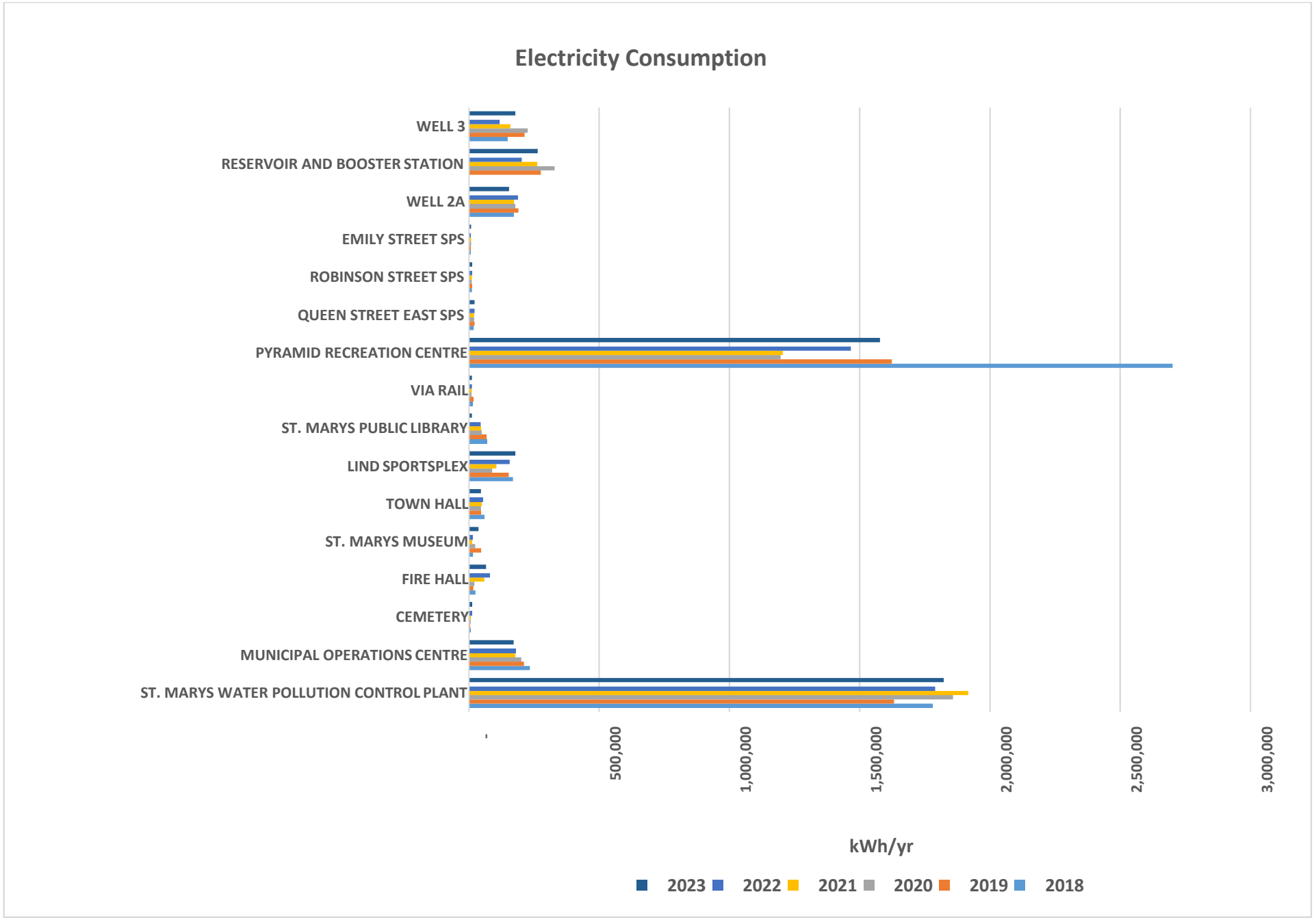
Aligning the capital plan and asset plan with the overarching goal of reduced energy consumption is crucial for achieving long-term sustainability and cost efficiency. By strategically planning capital investments and asset upgrades, municipalities can ensure that new facilities and retrofits incorporate energy-efficient technologies and practices. This alignment not only helps in reducing greenhouse gas emissions but also leads to significant operational savings. Integrating energy reduction goals into the capital planning process fosters a culture of environmental stewardship and positions the municipality as a leader in sustainable development. It also ensures that the financial resources are utilized effectively, prioritizing projects that yield the highest energy savings and environmental benefits.

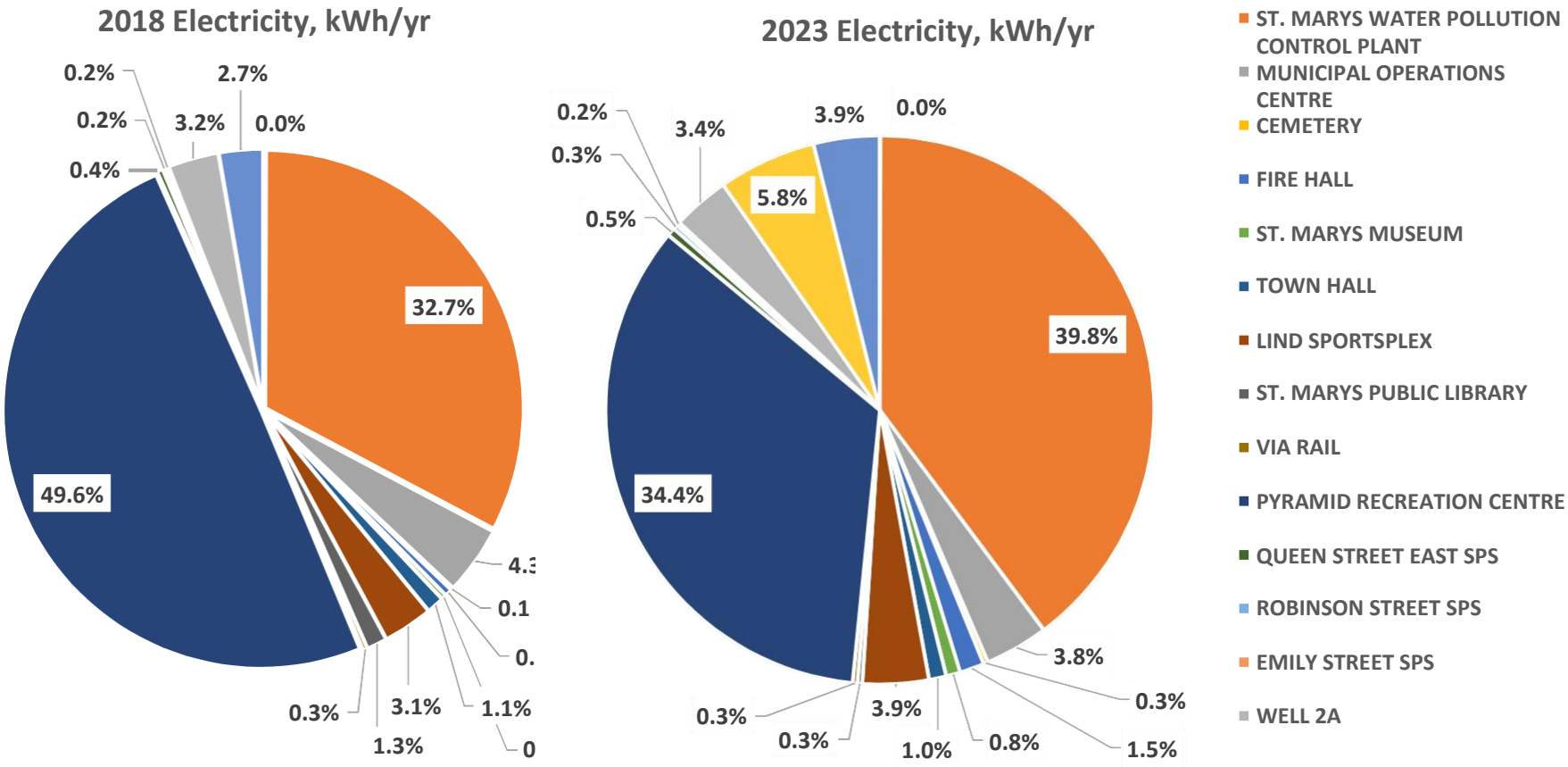
In the 2025 capital budget, the Town is poised to undertake significant investments aimed at enhancing energy efficiency and sustainability across its facilities. This includes the continuation of LED lighting installations in all municipal buildings, furthering the initiative that has already seen success in most facilities. Additionally, the town plans to incorporate motion sensor lighting to optimize energy usage. A major renovation of the indoor pool at the Pyramid Recreation Centre is slated, featuring the addition of a new HVAC unit and exhaust system to improve indoor air quality and protect the asset over the long term.

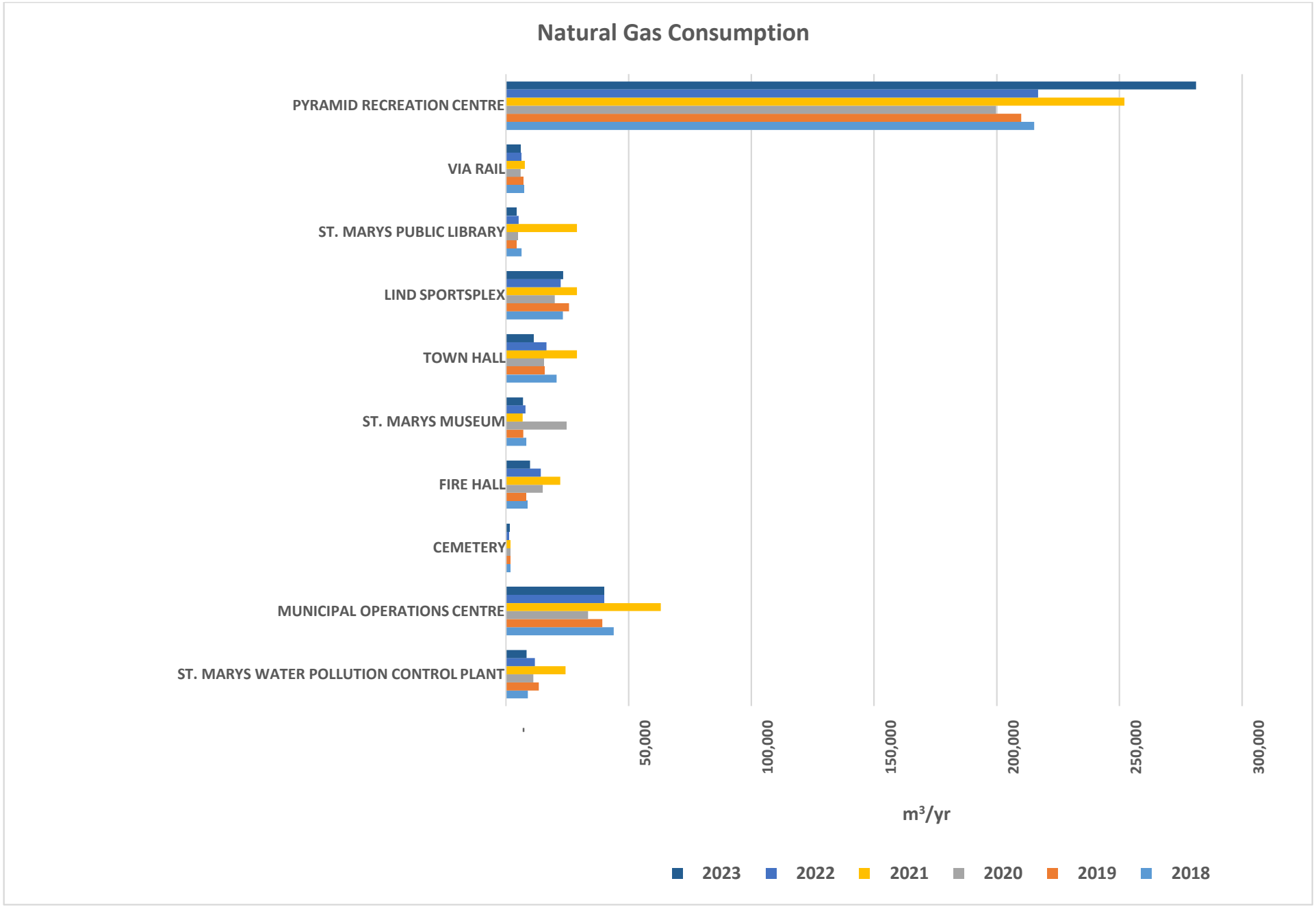
These measures, combined with a strategic alignment of the capital plan and asset management plan, underscore the Town's commitment to reducing greenhouse gas emissions and achieving significant operational savings.

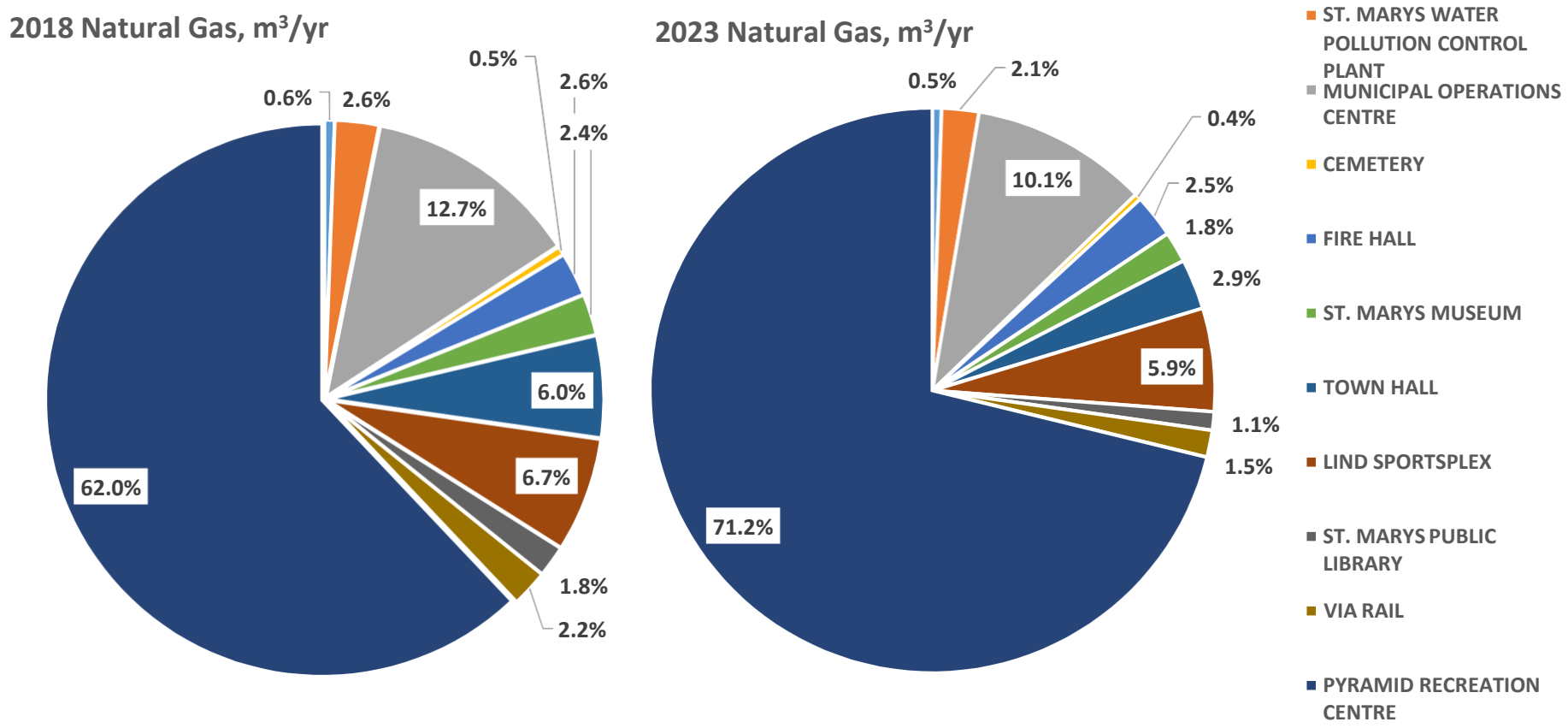
Appendix A

Electricity and Natural Gas Consumption 2018-2023


Electricity Consumption
WELL 3
RESERVOIR AND BOOSTER STATION
WELL 2A
EMILY STREET SPS
ROBINSON STREET SPS
QUEEN STREET EAST SPS
PYRAMID RECREATION CENTRE
VIA RAIL
ST. MARYS PUBLIC LIBRARY
LIND SPORTSPLEX
TOWN HALL
ST. MARYS MUSEUM
FIRE HALL
CEMETERY
MUNICIPAL OPERATIONS CENTRE
ST. MARYS WATER POLLUTION CONTROL PLANT
-
500,000
1,000,000
1,500,000
2,000,000
2,500,000
3,000,000
kWh/yr
2023
2022
2021
2020
2019
2018


2018 Electricity, kWh/yr
0.2%
2.7%
0.2%
3.2%
0.0%
0.4%
32.7%
49.6%
4.3
0.1
0.
0.3%
3.1%
1.1%
1.3%
0
2023 Electricity, kWh/yr
0.2%
3.4%
3.9%
0.0%
0.3%
5.8%
0.5%
39.8%
34.4%
3.8%
0.3%
0.3%
3.9%
0.3%
1.0%
0.8%
1.5%
ST. MARYS WATER POLLUTION CONTROL PLANT
MUNICIPAL OPERATIONS CENTRE
CEMETERY
FIRE HALL
ST. MARYS MUSEUM
TOWN HALL
LIND SPORTSPLEX
ST. MARYS PUBLIC LIBRARY
VIA RAIL
PYRAMID RECREATION CENTRE
QUEEN STREET EAST SPS
ROBINSON STREET SPS
EMILY STREET SPS
WELL 2A


Natural Gas Consumption
PYRAMID RECREATION CENTRE
VIA RAIL
ST. MARYS PUBLIC LIBRARY
LIND SPORTSPLEX
TOWN HALL
ST. MARYS MUSEUM
FIRE HALL
CEMETERY
MUNICIPAL OPERATIONS CENTRE
ST. MARYS WATER POLLUTION CONTROL PLANT
-
50,000
100,000
150,000
200,000
250,000
300,000
m³/yr
2023
2022
2021
2020
2019
2018


2018 Natural Gas, m³/yr
0.6%
2.6%
12.7%
0.5%
2.6%
2.4%
6.0%
6.7%
1.8%
2.2%
62.0%
2023 Natural Gas, m³/yr
0.5%
2.1%
10.1%
0.4%
2.5%
1.8%
2.9%
5.9%
1.1%
1.5%
71.2%
ST. MARYS WATER POLLUTION CONTROL PLANT
MUNICIPAL OPERATIONS CENTRE
CEMETERY
FIRE HALL
ST. MARYS MUSEUM
TOWN HALL
LIND SPORTSPLEX
ST. MARYS PUBLIC LIBRARY
VIA RAIL
PYRAMID RECREATION CENTRE

ONTARIO CANADA
ST. MARYS