



Energy Conservation and Demand Management Plan

2024-2029



Dymond
Haileybury
New Liskeard

City of • Ville de
**Temiskaming
Shores**



City of Temiskaming Shores

**5-Year Corporate Energy
Conservation and Demand
Management Plan**

2024-2029

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Energy Conservation and Demand Management Plan

Prepared in compliance with Ontario Regulation 25/23 requiring Ontario's Broader Public Sector (BPS) to prepare an updated Energy Conservation and Demand Management Plan every five years. The plan was approved by council on May 21, 2024.

Introduction

Executive Summary

The City of Temiskaming Shores has prepared this plan in accordance with Ontario Regulation 25/23, which mandates an updated Energy Conservation and Demand Management (CDM) plan every five years. The first CDM plan was published in 2014, followed by an updated report in 2019. The previous plan can be found here ([2019](#)). This latest report covers the period from 2024 to 2029 and will discuss previous conservation and demand management efforts while continuing to build on the experience gained from past reports.

In addition to providing an updated plan, this report will set new forward-looking goals to further reduce energy consumption. This year's plan update will incorporate and support the City's transportation and fleet asset plans, as well as the greenhouse gas emissions reduction plan, to ensure a comprehensive and integrated approach to managing energy.

Goals and Objectives for Conserving Energy

The City's mission is closely aligned with its [Corporate Greenhouse Gas Reduction Plan](#)'s target of reducing greenhouse gas (GHG) emissions by 40% below 2019 levels by 2033 and achieving net zero by 2050. This Energy Conservation and Demand Management plan is designed to guide the City towards an energy-efficient future while fostering a culture of environmental stewardship. By taking proactive steps to manage energy consumption and demand, the City aims to not only reduce costs but also contribute to a sustainable and efficient transition of the energy system.

The City aspires to lead by example in energy conservation within its sector. To achieve this, it will collaborate with community partners, sharing progress and best practices to inspire others to join in this endeavor. The plan will serve as a vital tool in monitoring, evaluating, and measuring corporate energy use, ensuring that it remains accountable and transparent in its efforts.

Based on clear objectives, this plan includes enhancing staff understanding of energy and water conservation, implementing energy efficiency retrofits in priority facilities, and reducing overall energy usage and costs. By integrating this plan with the Corporate Greenhouse Gas Emissions Reduction Plan and aligning it with broader climate and energy initiatives, the City is taking a comprehensive approach to addressing the energy demand challenges ahead.

To ensure the successful realization of goals and objectives, ambitious yet achievable targets have been set. Over the next five years, the City aims to decrease overall energy consumption of its facilities and fuel consumption of its fleets, targeting a 20% reduction from the 2019 baseline by 2029. Detailed strategies for these reductions will be further explored later in the report.

Baseline Energy Consumption

Historical Energy Usage

This section presents an analysis of energy usage across all buildings and facilities within the City, since reporting began in 2011. By examining the historical energy consumption patterns, the goal is to provide a clear understanding of current and past energy consumption trends, serving as a foundation for the City to prioritize sectors for targeted efforts in reducing energy usage and improving overall sustainability.

Detailed graphs displaying electricity (kWh), natural gas (m³) consumption, equivalent kilowatt-hours (ekWh), greenhouse gas emissions (tCO₂e), and cost per year over the reported years are provided below. These graphs offer valuable insights into the energy usage patterns of the City, allowing for informed decision-making in future energy conservation and demand management initiatives.

The types of energy sources used in the operation of City facilities and delivery of services, include electricity supplied by Hydro One at standard rates, natural gas supplied by Enbridge Gas at standard rates, and propane supplied by Grant Energy Inc/Grant Fuels Inc at standard rates upon delivery.

To organize and assess energy data, the City compiles and submits raw data sourced from its utility bills and uploads it to software tools such as EnergyCAP and Energy Star Portfolio Manager. These tools track monthly and annual energy consumption, enabling the identification of trends, detection of anomalies, and monitoring of progress towards climate goals.

The following graph (see figure 01) illustrates the electricity consumption (kWh) between 2011 and 2023 and compares it to the cost. As depicted in the graph, the overall electricity consumption has experienced a decline of 31% from 2011 to 2023. This considerable reduction can be attributed to various energy conservation initiatives from previous plans, resulting in a consistent downward trend in energy usage.

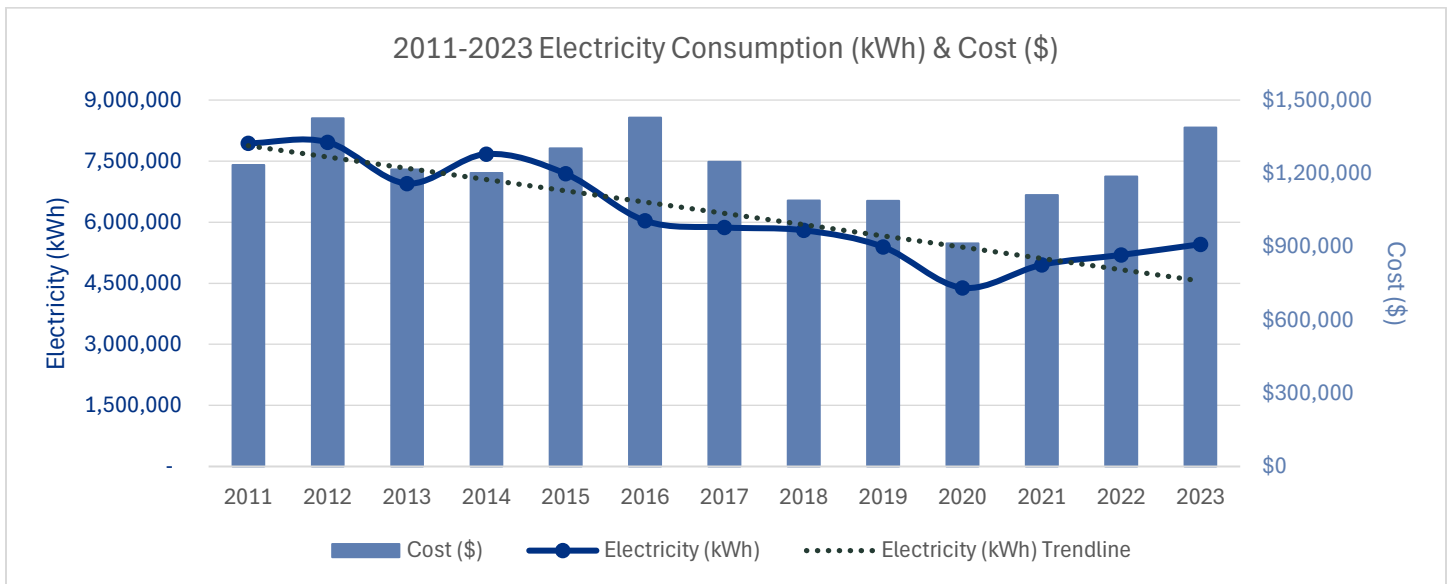


Figure 01: 2011-2023 Electricity Consumption (Kilowatt-Hours) & Annual Costs (\$)

Historical Energy Usage

Throughout this multi-year period, a gradual decrease in natural gas consumption has been observed, as depicted in figure 02, resulting in a 1% reduction from 2011 to 2023. This highlights the importance of intensified energy conservation efforts and transitioning towards sustainable energy sources. It is clear that further initiatives are needed to significantly impact energy consumption patterns within the City.

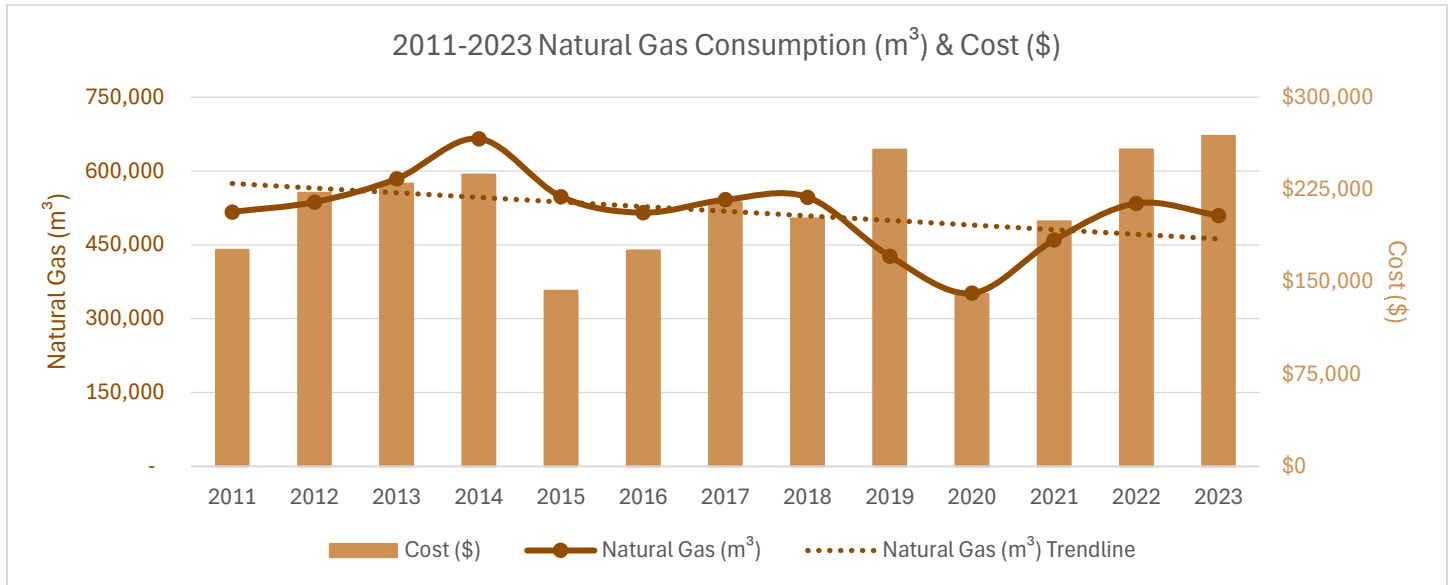


Figure 02: 2011-2023 Natural Gas Consumption (m³) & Annual Costs (\$)

Historical Energy Usage

The following graph (see figure 03) illustrates the total energy consumption of the City's facilities in equivalent kilowatt-hour (ekWh) and greenhouse gas emissions in tonnes of carbon dioxide equivalent (tCO₂e). By converting natural gas volumes to ekWh units and combining them with electricity use, a total energy volume is established. This approach assists in tracking and monitoring energy usage effectively, identifying areas for improvement. By examining the trends in ekWh and tCO₂e, correlations and comparisons are made to ensure alignment with the goals of both the Energy Conservation and Demand Management Plan and the Corporate Greenhouse Gas Reduction Plan.

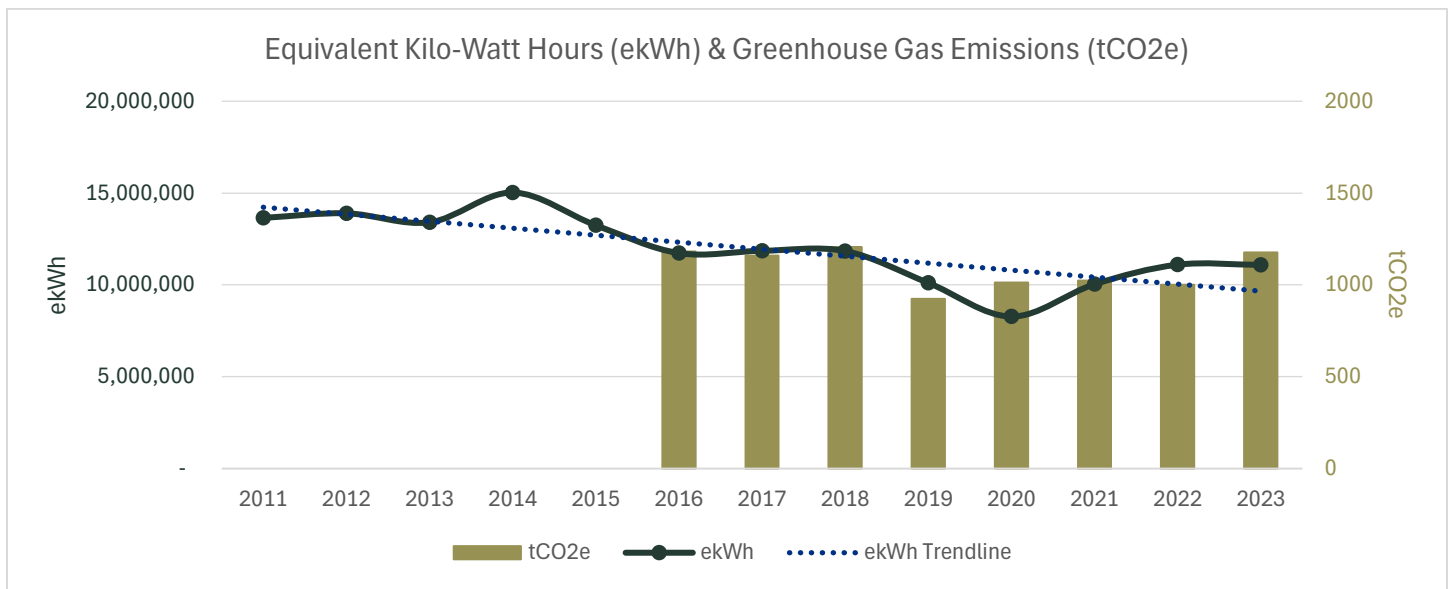


Figure 03: 2011-2023 Equivalent Kilowatt-Hours (ekWh) & Greenhouse Gas Emissions (tCO₂e)

Since 2011, the City has experienced a 19% decrease in ekWh consumption by 2023, reflecting the commitment to implementing energy conservation measures and adopting good energy practices. This positive trend is attributed to ongoing efforts to enhance energy efficiency in heating, cooling, and lighting options, alongside the continued implementation of energy-saving actions. GHG emissions (tCO₂e) have decreased 0.5% since the baseline year in 2016.

Energy Baseline Analysis

The trendline for energy consumption for both electricity and natural gas indicates a gradual decrease over time. However, the cost of energy has steadily risen for both sources in recent years, highlighting the importance of continuing efforts to reduce consumption. In response to this challenge, the City has implemented several facility-related projects focused on reducing energy usage and improving overall sustainability.

It is also important to consider the impact of different energy sources on corporate emissions. Natural gas is the primary contributor to emissions in the inventory, whereas electricity has the lowest emissions due to Ontario's low-carbon electricity grid. Addressing these differences, it is essential to prioritize a shift away from natural gas use to significantly reduce overall emissions. This presents an opportunity for exploring further electrification and energy efficiency measures to reduce reliance on natural gas while also saving on overall energy costs.

Over the past decade, various initiatives have been undertaken to reduce energy consumption and improve efficiency. These include LED lighting retrofits, HVAC upgrades, humidification systems, looping of water systems, high-efficiency furnace upgrades, and the conversion of the medical center to library use. Additionally, a major street lighting retrofit across the City was completed using funding incentives.

These efforts have contributed to a reduction in energy consumption and a more sustainable future for the City. By continuing to prioritize energy efficiency and conservation, the City can further reduce its environmental impact and promote a greener future for residents. Below (table 01) is a list of improvements already implemented from the previous plan.

In the original 2014-2019 CDM Plan, the City aimed to reduce energy consumption by 1-5% in City facilities. Building on this success, the 2019 follow-up plan set a more ambitious goal of achieving a 5% reduction in energy consumption by 2023. While there was an increase of 11% in ekWh since the last report in 2019, the overall consumption has decreased by 19% from the 2011 baseline year.

Energy Consumption by Sector

In the efforts to optimize energy conservation and demand management, it is crucial to monitor energy consumption by sector. This approach allows staff to prioritize buildings that require targeted interventions to reduce energy usage. By analyzing the data, the City has identified the buildings with the highest electricity and natural gas consumption.

Currently, a Building Decarbonization Feasibility Study is underway, focusing on the fourteen buildings with the largest carbon footprint and those with the highest energy consumption. This study will enable the City to pinpoint specific measures and actions that can be implemented to these buildings to achieve further energy savings. By reducing energy consumption, the City will also contribute to a significant reduction in emissions.

In addition to the analysis of energy consumption by sector, a detailed examination of individual buildings and facilities will be provided in Appendix A of the CDM plan. This will ensure that the strategy is informed by a thorough understanding of the energy usage patterns and needs of each building, enabling the City to implement targeted and effective measures for energy reduction and emissions mitigation.

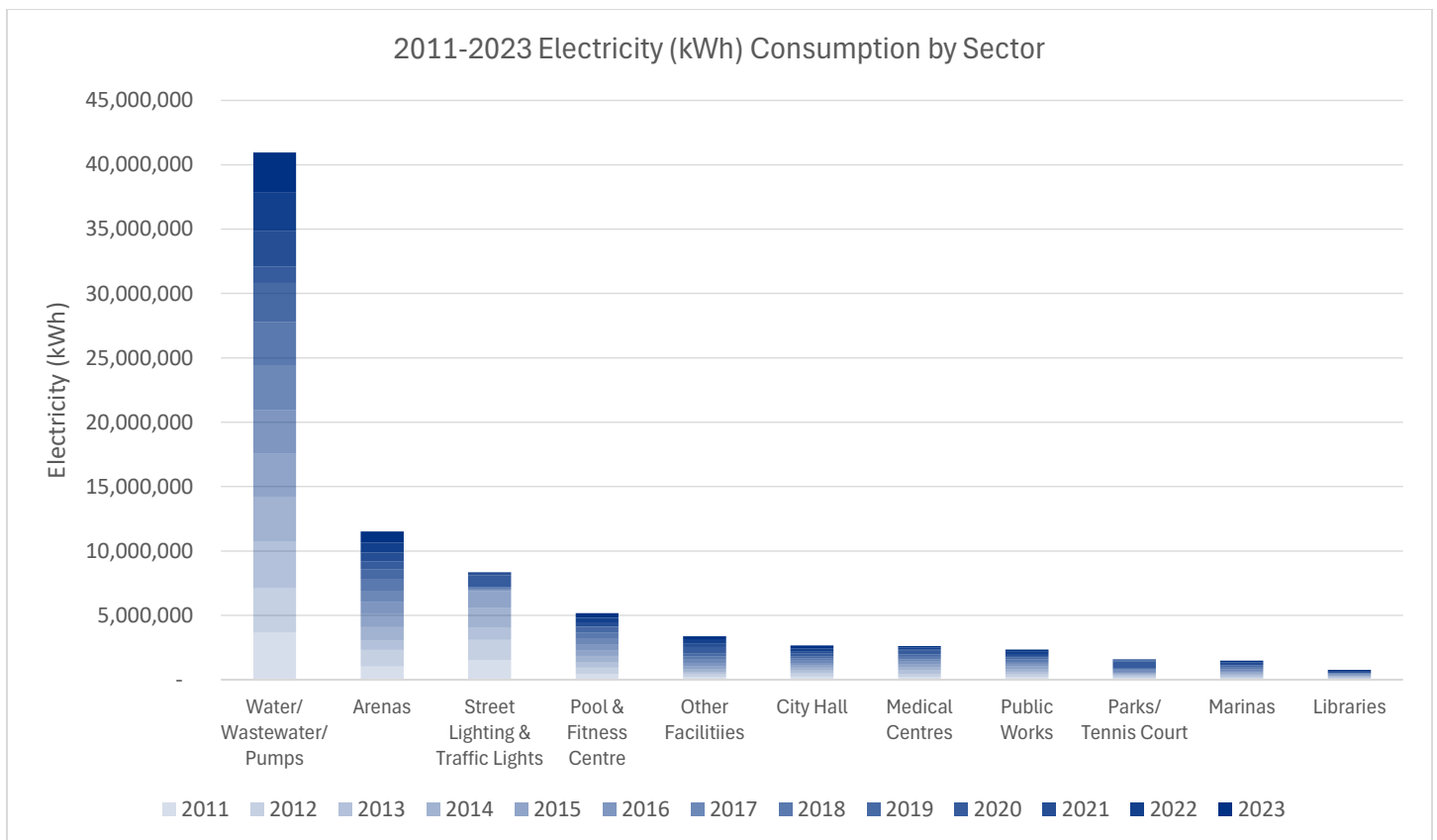


Figure 04: 2011-2023 Electricity (Kilowatt-Hour) Consumption by Sector

Energy Consumption by Sector

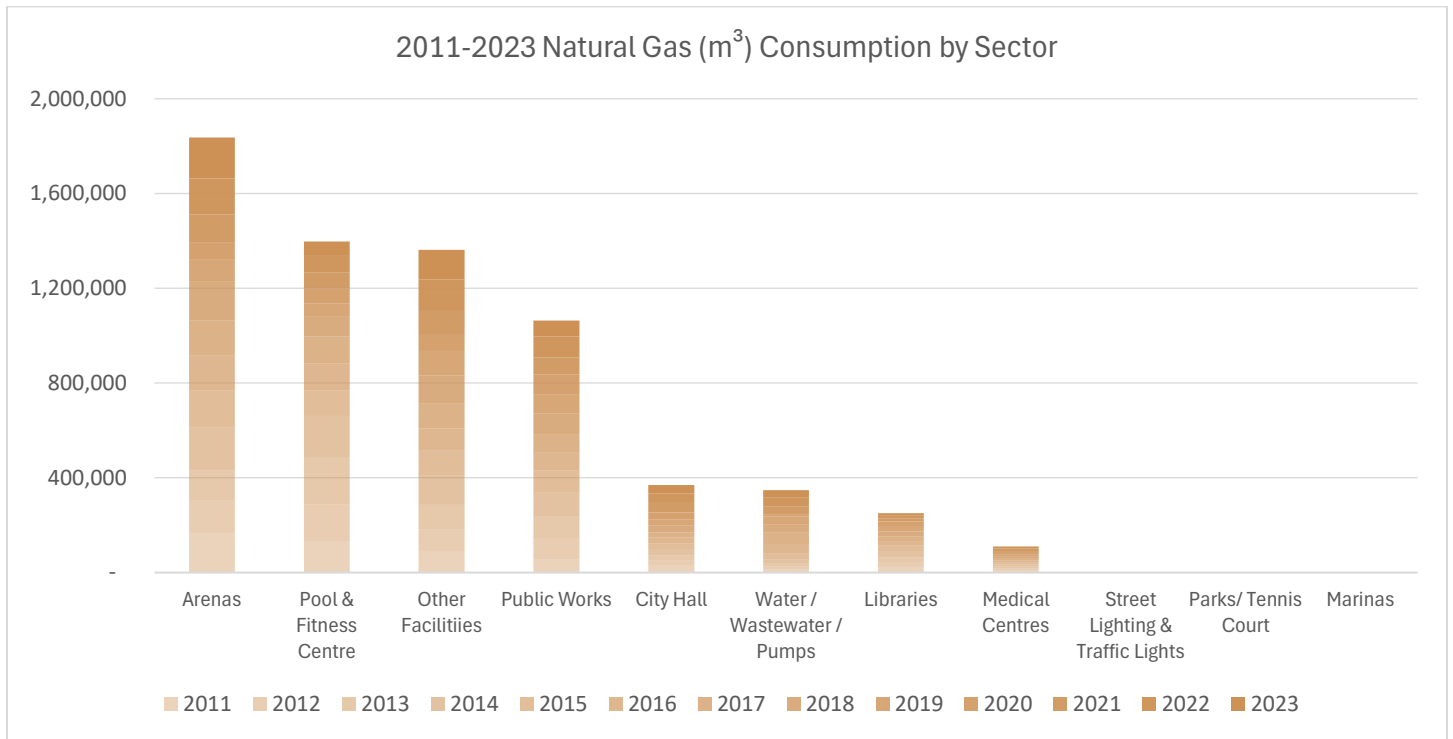


Figure 05: 2011-2023 Natural Gas (m³) Consumption by Sector

In the ongoing effort to promote energy conservation and develop a comprehensive plan, historical energy usage across various sectors has been closely reviewed. This analysis has provided valuable insights into the largest consumers of energy, helping to better understand where attention should be focused.

Energy Consumption by Sector

To further refine the approach, a recent snapshot of GHG emissions from 2023 has been examined (see figure 06). This will serve as an update to the previous report, enabling the maintenance of a forward-looking perspective while continuing to identify areas for improvement. By focusing on specific sectors and their energy usage patterns, targeted strategies such as the Building Decarbonization Feasibility Study, can be developed to reduce consumption and minimize environmental impact.

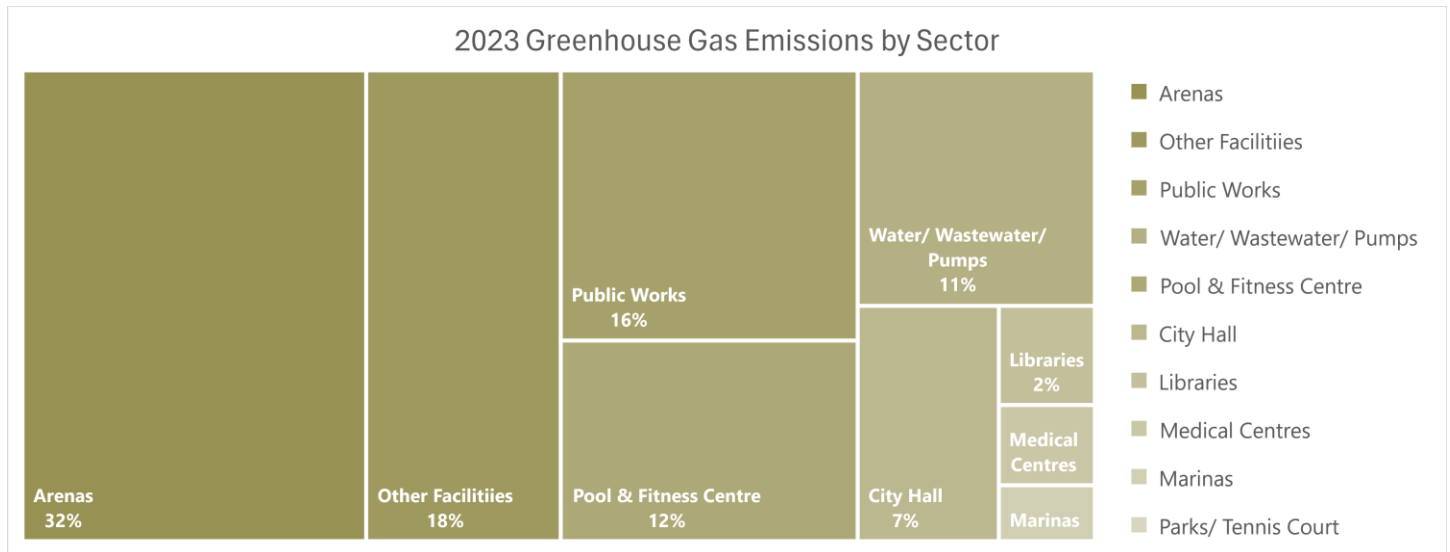


Figure 06: 2023 Greenhouse Gas Emissions by Sector

Energy Conservation

Implemented Actions

It is important to acknowledge the significant strides made in implementing energy-saving measures. The commitment to these initiatives not only contributes to saving on energy costs but also plays a crucial role in reducing overall GHG emissions and energy consumption. As the focus shifts towards the future, it is imperative to continue identifying and implementing new actions to further enhance our energy conservation efforts. By doing so, this demonstrates a commitment to ensuring long-term sustainability of operations. Below in table 01 shows a variety of actions taken over the past five years to conserve energy and reduce emissions.

Year	Implemented Action
2019	<ul style="list-style-type: none"> New Public Works Cold Storage (C) was built to replace old Quonset at 200 Lakeshore Rd N, New Liskeard
2019	<ul style="list-style-type: none"> Boiler upgrades to the Waterfront Pool & Fitness Centre
2019	<ul style="list-style-type: none"> LED lights on Don Shepherdson Memorial Arena surface
2019-2024	<ul style="list-style-type: none"> LED upgrades to decorative lights in downtown cores
2019	<ul style="list-style-type: none"> Boiler and lighting upgrades for the Temiskaming Shores Library
2019-2020	<ul style="list-style-type: none"> New Liskeard Medical Centre at 285 Whitewood Ave W, New Liskeard was renovated and converted to new Temiskaming Shores Library
2020	<ul style="list-style-type: none"> Roof Replacement at Shelly Herbert-Shea Memorial Arena
2020	<ul style="list-style-type: none"> Dehumidifier Replacement at Shelly Herbert-Shea Memorial Arena
2021	<ul style="list-style-type: none"> Hot water heater replacement at the Don Shepherdson Memorial Arena
2021	<ul style="list-style-type: none"> Library Building at 50 Whitewood Ave W, New Liskeard was sold
2021	<ul style="list-style-type: none"> LED Street Light Upgrades
2022	<ul style="list-style-type: none"> Implemented comprehensive energy tracking with EnergyCap software
2022	<ul style="list-style-type: none"> Small Office Food Bank & Park Washroom, at 400 Morissette Dr, Haileybury, was demolished
2022	<ul style="list-style-type: none"> Roof Replacement at Waterfront Pool & Fitness Centre
2022	<ul style="list-style-type: none"> Chiller Replacement at Shelley Herbert-Shea Memorial Arena
2022-2024	<ul style="list-style-type: none"> Filter Rehabilitation at Haileybury Water Treatment Plant
2022	<ul style="list-style-type: none"> Library Building at 545 Lakeshore Rd S, Haileybury was sold
2022-2023	<ul style="list-style-type: none"> New Haileybury Fire Station at 54 Rorke Ave, Haileybury was built to replace old Fire Station at 468 Georgina Ave, Haileybury
2023	<ul style="list-style-type: none"> New Arena Condenser at Don Shepherdson Memorial Arena
2023	<ul style="list-style-type: none"> Landfill at 704165 Rockley Rd, New Liskeard reopened, new weigh scale house and storage shed was built, replacing old building
2023	<ul style="list-style-type: none"> New LED fixtures at Dymond Firefighters Park
2024	<ul style="list-style-type: none"> Haileybury Fire Station at 468 Georgina Ave, Haileybury was sold

Table 1: Implemented Energy Reduction Actions

Reduction Targets

The City's energy conservation initiatives entail various targets to promote energy reduction and planning. By analyzing the City's energy baseline usage, a better understanding of its future energy consumption and demands can be obtained. These findings will be integrated into a continuous energy management program for the City.

Key areas of focus will involve the implementation of facility retrofits, prioritizing the highest consumption facilities first, with the goal of making buildings more energy efficient, reducing costs, lowering maintenance requirements, and improving overall operations while decreasing energy usage and GHG emissions.

Staff and operator training, education, and awareness will play crucial roles in promoting sustainability and energy management within current and future staff responsibilities. Utilizing funding opportunities will further enhance project viability through grants.

Ambitious yet attainable targets have been set for reducing GHG emissions and energy consumption. The Corporate GHG Reduction Plan aims to achieve a 20% reduction in emissions by 2029 and a further reduction to 40% declines by 2033, compared to the 2019 baseline.

To meet these objectives, a target with a similar percentage reduction has been developed for the CDM plan. It is estimated that the initial 20% reduction can be achieved over the next five years by implementing the building decarbonization projects on the main energy-consuming buildings. These projects will focus on enhancing energy efficiency and reducing energy use.

The implementation of additional strategies will unlock future milestones of the PCP Milestone Tool, facilitating the tracking of progress toward energy conservation and GHG reduction targets. By continuously refining the demand management strategy and incorporating new initiatives, the City can ensure alignment with long-term objectives.

Looking beyond the near-term efforts, renewable energy projects will be essential for reaching the 40% declines necessary to meet set goals. By investing in and adopting renewable energy technologies, the City will further reduce its reliance on fossil fuels, decrease its carbon footprint, and contribute to a more sustainable future.

Facilities

The City's civic buildings, totaling 36 facilities (four of which were sold in the past five years), rely on a combination of electricity and natural gas. These account for approximately 42% of the City's GHG emissions, with the majority from natural gas used for heating and a significant part from electricity used in the water and wastewater sector. While electricity is a lesser source of emissions, prioritizing energy efficiency is critical for lowering both operational and maintenance costs. Investments in energy efficiency can also support fuel transition initiatives, further enhancing the City's energy management strategies.

For an overview of energy management across the City's key facilities, refer to [Appendix A](#).

Water and Wastewater

In the water and wastewater sector, most of the energy consumed is the result from the motors powering sanitary and storm sewer pumps. The City operates four Drinking Water Treatment & Distribution stations and five Wastewater Treatment Plants, primarily relying on electricity, and is therefore relatively low in emissions. Energy use and flow rates can be affected by population dynamics, infrastructure age, seasonal and climatic shifts, operational efficiency, technological improvements, and conservation strategies. Optimizing these elements is essential for sustainable water management.

From 2019 to 2023, the City saw a 1.5% decrease in average influent annual flow rate, from 1,623.76 Mgal/d to 1,647.52 Mgal/d and makes up approximately 8% of overall GHG emissions. To enhance conservation, the City has implemented water meters in industrial, commercial, and institutional establishments. Adopting smart metering and water management systems has enhanced operational efficiencies. Moving forward, the City remains committed to regular maintenance practices and community water conservation initiatives.

Outdoor Lighting

The majority of energy consumed in outdoor lighting is related to streetlights and traffic lights. Other lighting assets include decorative lighting, lighting used for parks, arenas, and sports fields. Streetlights account for approximately 0.5% of the City's total GHG emissions. Metered accounts provide actual electrical consumption data, while flat-rate billed assets like overhead lighting and traffic signals have estimated usage. All traffic and streetlighting are well into the process of being converted to LED from high-pressure sodium (HPS) and metal halide fixtures, reducing energy consumption. This included the 2019 to 2024 initiative of upgrading decorative lighting in downtown cores to LEDs. However, there remains a considerable amount of decorative lighting yet to be converted, with ongoing efforts planned throughout 2024-2029.

Corporate Fleet

The City is committed to achieving significant reductions in GHG emissions as outlined in our Corporate Greenhouse Gas Reduction Plan, with a focus on transitioning select light-duty fleet vehicles to electric models over the next five years. This ambitious yet achievable goal aligns with environmental targets and provides cost savings and long-term benefits.

Currently, the corporate fleet contributes 49.9% to the overall GHG inventory. By adopting electric vehicles (EVs), a considerable reduction in GHG emissions is anticipated, bringing the City closer to its target of a 96% decrease in tCO₂e from the 2019 baseline. As EVs become more cost-competitive, particularly when factoring in potential grants and incentives, immediate savings are expected, coupled with significant long-term reductions in maintenance and energy expenses.

To facilitate this transition, plans are underway to develop a network of EV charging options and explore biodiesels as an interim solution for its medium and heavy-duty fleet vehicles. By proactively electrifying the fleet, the City demonstrates its commitment to environmental and fiscal responsibility. This initiative will greatly benefit the community and set a precedent for other municipalities.

Strategic Action Plan

Corporate Practices

Expanding on existing policies and practices, the City will demonstrate leadership and commitment both within the corporation and the community:

- **Energy Management Team:** Defined roles, responsibilities, and accountability structures will be maintained to ensure effective energy management.
- **Energy Procurement:** Opportunities for procuring energy from renewable sources will be explored, and favourable terms with suppliers will be negotiated. The City relies on the energy procurement service provided by Local Authority Services (LAS) to maintain predictable electricity and natural gas commodity costs. This program enables bulk-buying power through collaboration with other municipal entities, ensuring advantageous aggregated energy purchasing opportunities. The City commits to annual review and evaluation of the LAS program's effectiveness, considering alternative options and analyzing participation outcomes regularly.
- **Climate Lens Framework:** For regular reporting to council, this series of questions enables managers to assess climate impacts of proposed actions and vice versa. Integrated into administrative reports, it promotes climate consideration in decision-making, facilitating a shift towards sustainability. A supporting guide document was developed to inspire sustainable thinking, provide background information, and offer examples. Benefits can include reducing energy use and costs.
- **Day-to-Day Operations:** Renewed focus will be placed on reducing the energy footprint across all aspects of daily operations.

Education, Awareness and Outreach

The City will provide guidance and leadership to empower employees and cultivate a culture of conservation through:

- **Energy Skills Training Program:** Equipping employees with the necessary skills and knowledge to adopt energy-efficient practices.
- **Energy Awareness Training:** Conducting educational sessions to raise awareness about energy conservation.
- **Outreach Programs:** Engaging with the community through outreach initiatives and recognizing energy-saving efforts.
- **Feedback Mechanisms:** Establishing channels for employees to provide suggestions and ideas for improving energy efficiency.
- **Brainstorming Sessions:** Encouraging collaborative discussions to generate innovative solutions for energy conservation challenges.

Energy Conservation Action Plan and Energy Information Management

Continuous identification and implementation of energy conservation processes, programs, and projects across all areas of the City:

- Facility Audits: Conducting energy audits and retro-commissioning studies to identify opportunities for efficiency improvements.
- Asset Renewal: Integrating energy conservation measures into capital asset renewal projects.
- Energy Information Management: Continue monitoring, measuring, and verifying energy conservation activities to ensure compliance with targets and track progress effectively.

By implementing these strategic actions, the goal of the City is to instill a culture of energy conservation, drive significant reductions in energy consumption, and achieve long-term sustainability targets.

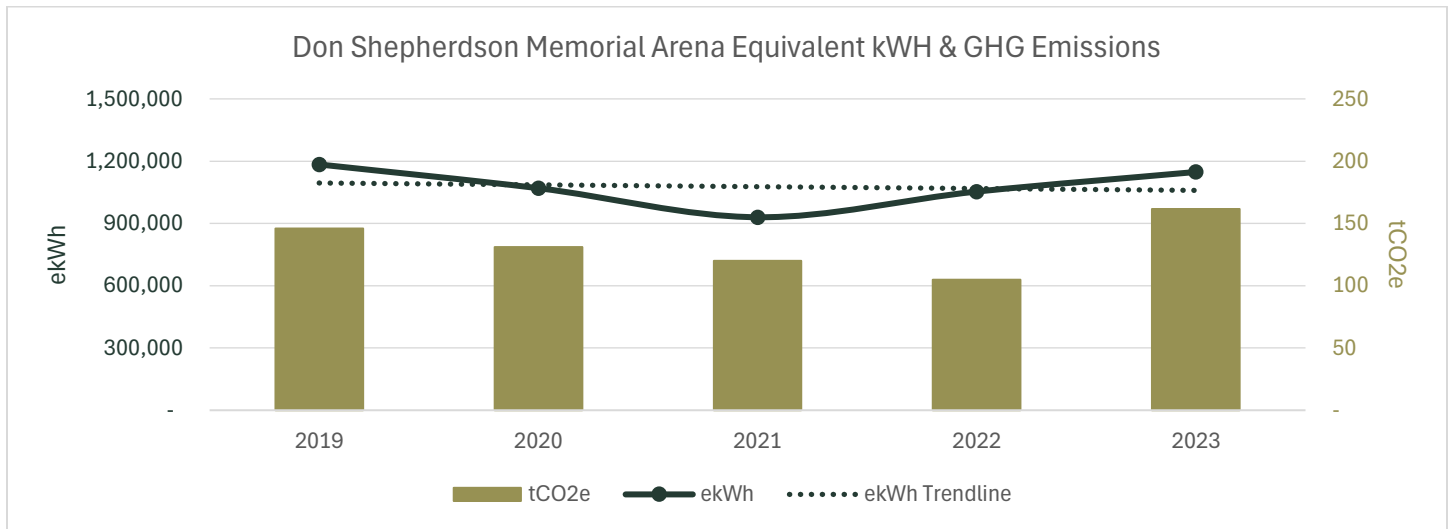
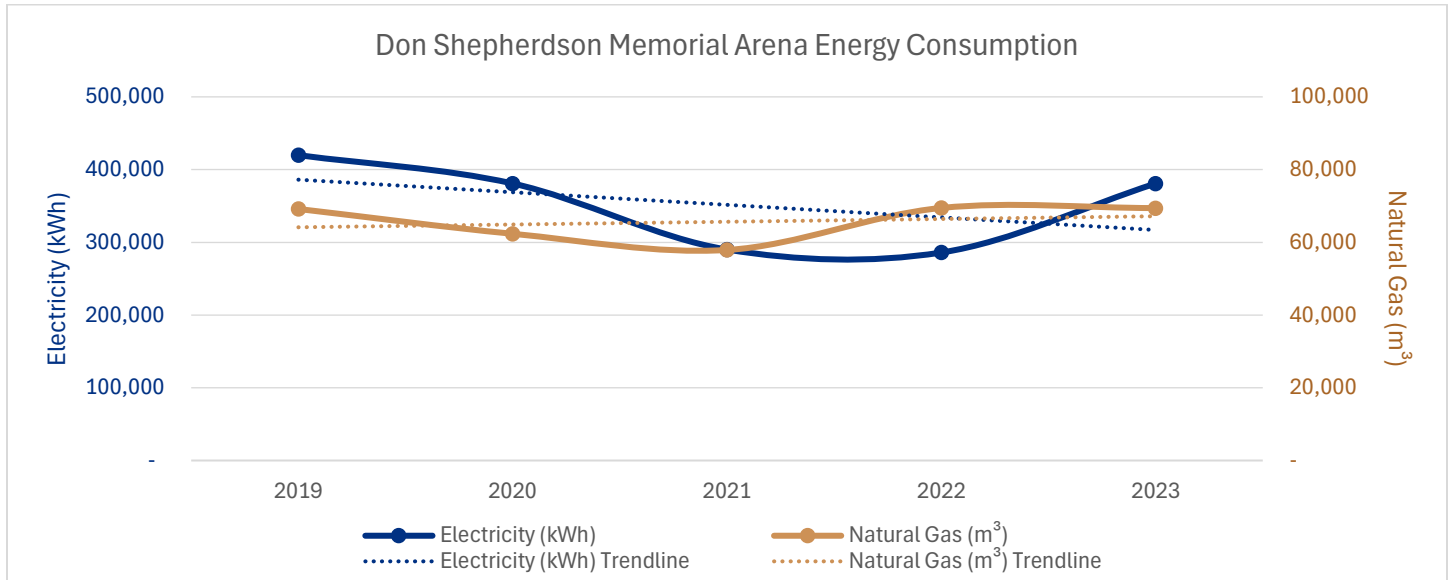
Climate Change Committee

The Climate Change Committee was established by the City in 2021, comprising public appointees, council members, and staff, to facilitate meaningful discussions on energy conservation. Initially assigned with revising the 2019 Greenhouse Gas Reduction Plan and setting more ambitious targets, the committee has since evolved into a standing council committee. It meets quarterly to address various sustainability topics within the community and plays a pivotal role in implementing and monitoring the City's climate action plan. With expertise in sustainability and climate change, its members provide valuable guidance for plan implementation, monitoring progress, proposing new initiatives, and ensuring adherence to set targets. Meetings serve as platforms for proposing, discussing, and refining new projects, essential for achieving the City's climate goals.

Appendix A - Buildings and Facilities Analysis

Arenas

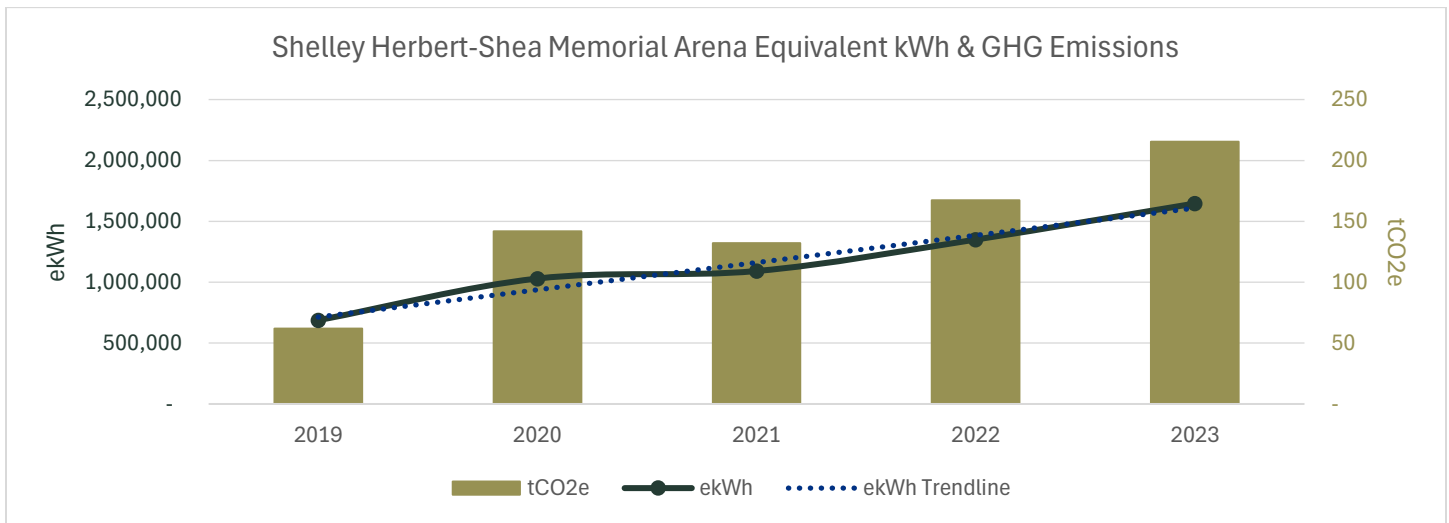
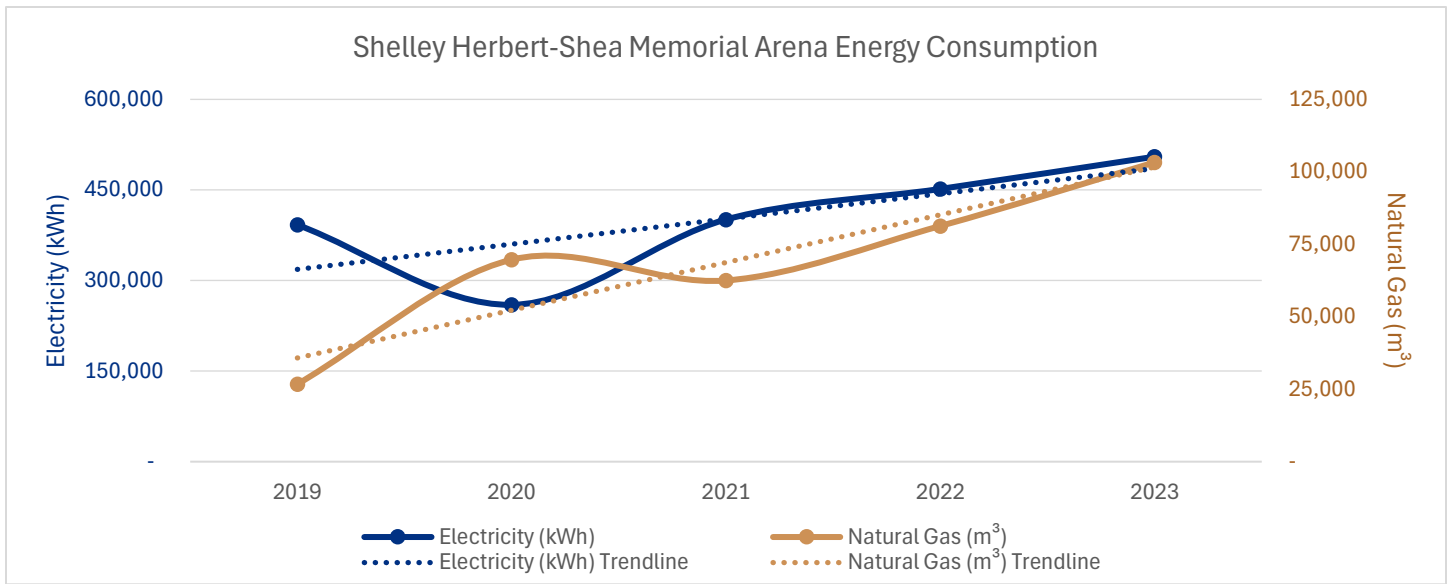
Don Shepherdson Memorial Arena – 75 Wellington St S, New Liskeard



From 2019 to 2023, the Don Shepherdson Memorial Arena saw a 3% reduction in energy use, from 1,184,175.46 ekWh to 1,147,891.3 ekWh, while GHG emissions increased by 11%, from 145.8 to 161.7 tCO₂e. Key upgrades include LED lighting on the arena surface in 2019 and a more efficient arena condenser introduced in 2023. The transition to an electric ice resurfacer in 2024, from a propane-based model, will further decrease emissions and costs. This facility is part of the 2024 Building Decarbonization Feasibility Study, targeting net-zero emissions by 2050, aligning with the Corporate Greenhouse Gas Reduction Plan. The study, supported by the Federation of Canadian Municipalities under the Green Municipal Fund, will inform various energy improvement projects. Future initiatives include a roof replacement and additional energy-saving measures, as funding becomes available annually, through 2024-2029.

Arenas

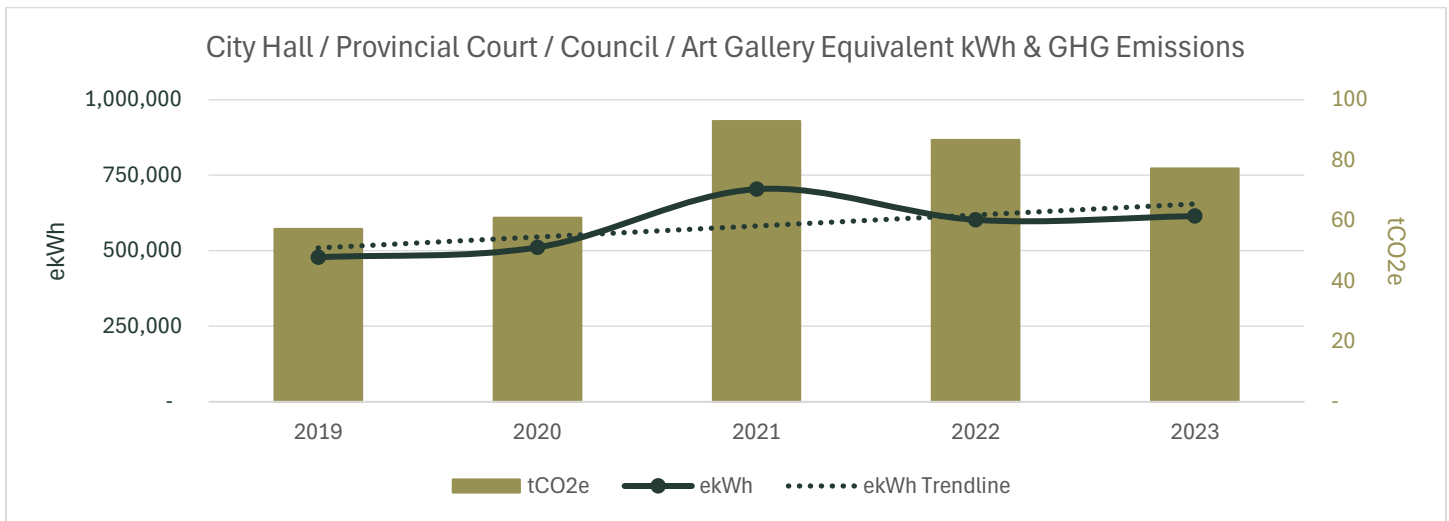
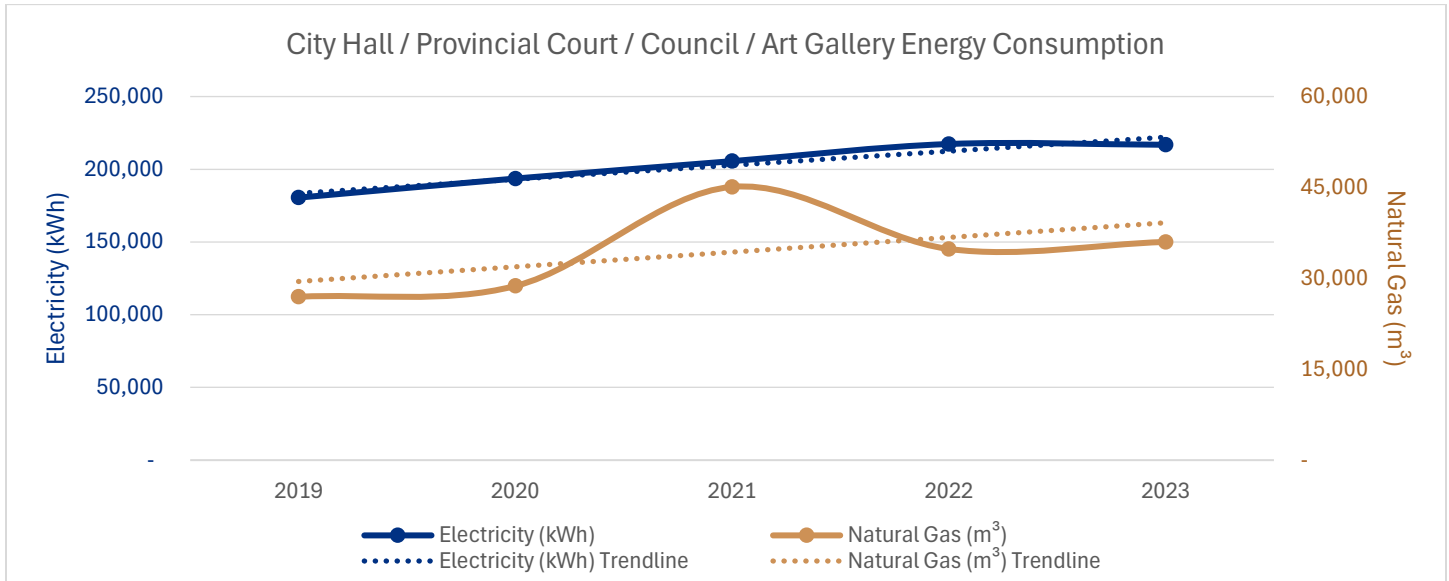
Shelley Herbert-Shea Memorial Arena – 400 Ferguson Ave, Haileybury



Over the past five years, the Shelley Herbert-Shea Memorial Arena experienced a 139% increase in energy consumption, from 687,933.34 ekWh in 2019 to 1,646,276.14 ekWh in 2023, and a 249% increase in GHG emissions, from 61.8 to 215.5 tCO₂e. Despite these challenges, upgrades were implemented, including a partial roof replacement, dehumidifier replacement in 2020, and chiller replacement in 2022. The arena is also included in the 2024 Building Decarbonization Feasibility Study, with the goal to achieve net zero emissions by 2050, in line with the Corporate Greenhouse Gas Reduction Plan. This study, supported by the Federation of Canadian Municipalities under the Green Municipal Fund, will inform future retrofits and energy improvement projects. Anticipated integration of further energy-saving measures is expected as annual funding becomes available in the next five years.

City Hall

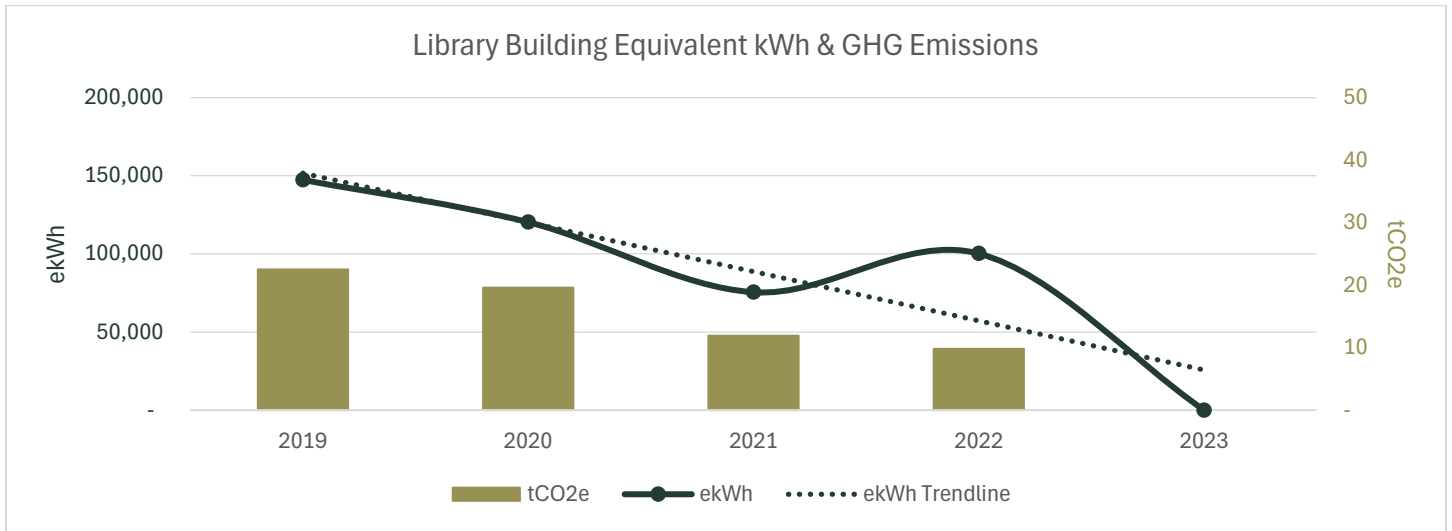
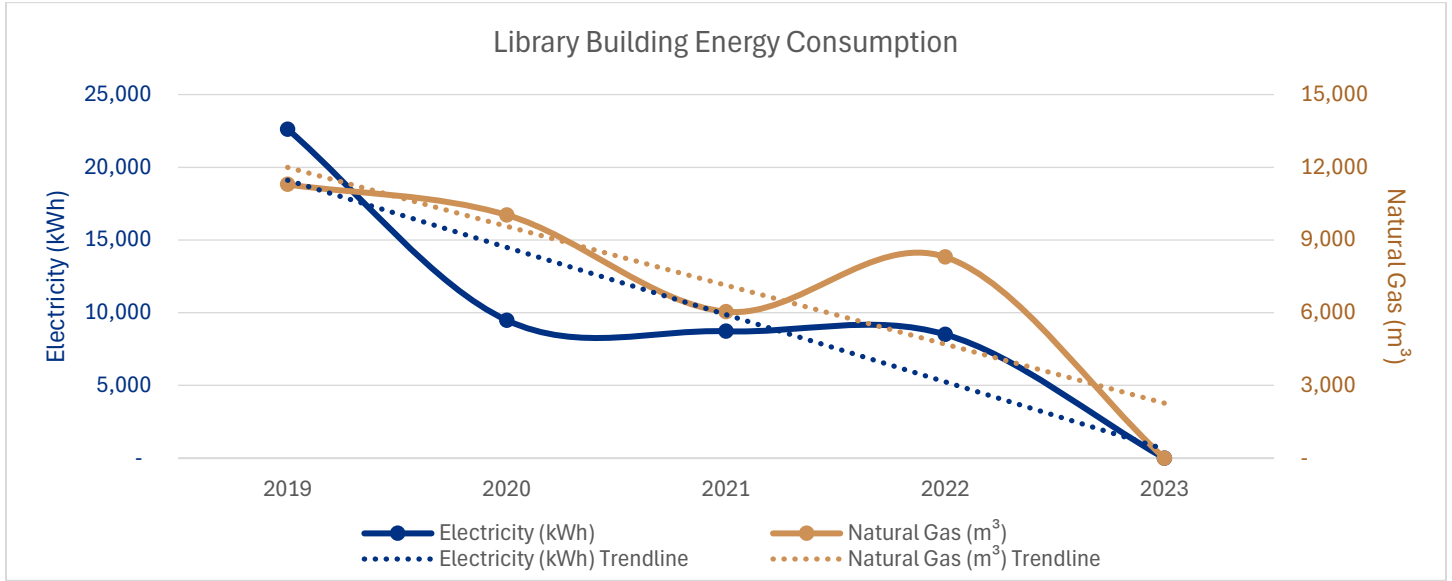
City Hall / Provincial Court / Council / Art Gallery – 325 Farr Dr, Haileybury



In the past five years, City Hall has experienced a 29% increase in energy consumption, from 478,353.1 ekWh in 2019 to 614,757.88 ekWh in 2023, and a 35% increase in GHG emissions, from 57 to 77 tCO2e. This facility is part of the 2024 Building Decarbonization Feasibility Study, with the goal of net zero emissions by 2050, as outlined in the Corporate Greenhouse Gas Reduction Plan. This study, backed by funding from the Federation of Canadian Municipalities under the Green Municipal Fund, will inform future retrofits and energy improvement projects. As funding becomes available annually, additional measures will be introduced to further objectives through 2024-2029.

Libraries

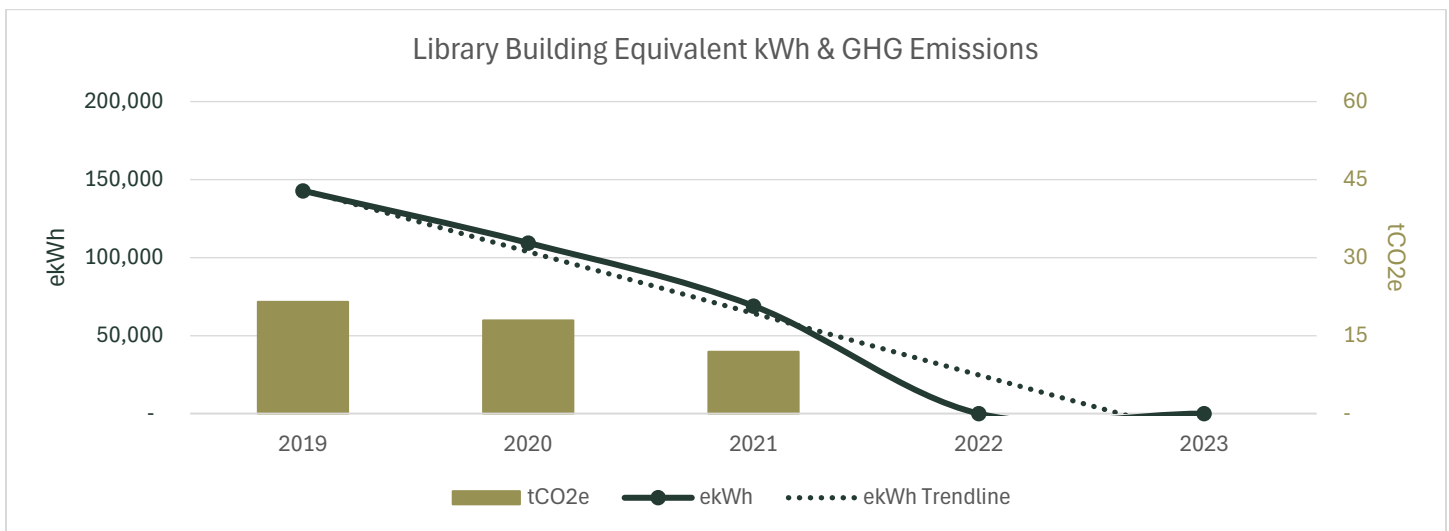
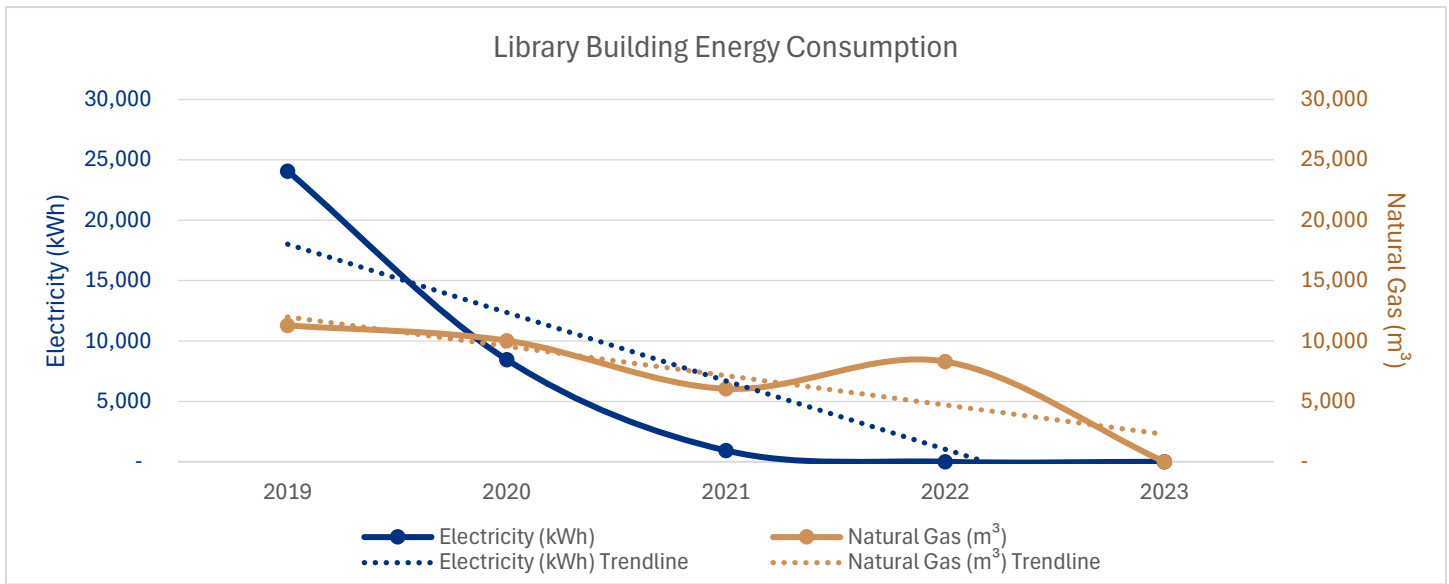
Library Building (Old) – 545 Lakeshore Rd S, Haileybury



From 2019 to 2023, the Library at 545 Lakeshore Rd S had a 100% reduction in energy use and GHG emissions, dropping from 147367.07 ekWh and 22.5 tCO₂e to zero. This significant change resulted from the sale of this building in 2022. The City consolidated two library locations into one and relocated to a renovated facility at 285 Whitewood Ave W, now the Temiskaming Shores Library. This transition not only conserves energy and reduces costs, but also establishes a foundation for future initiatives, through 2024-2029.

Libraries

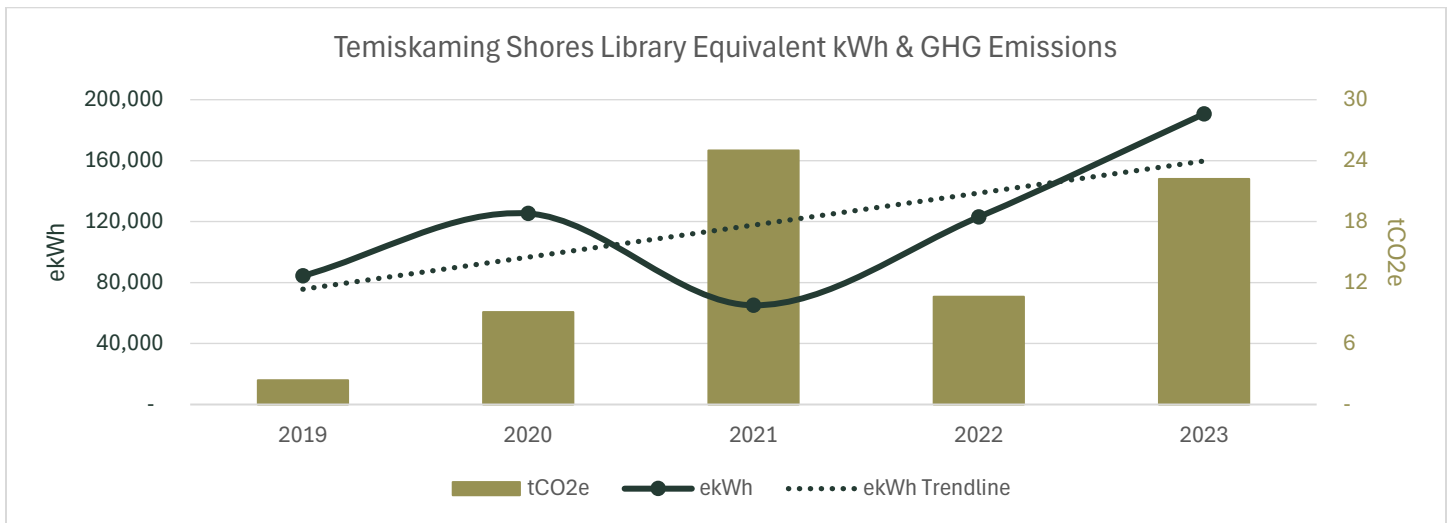
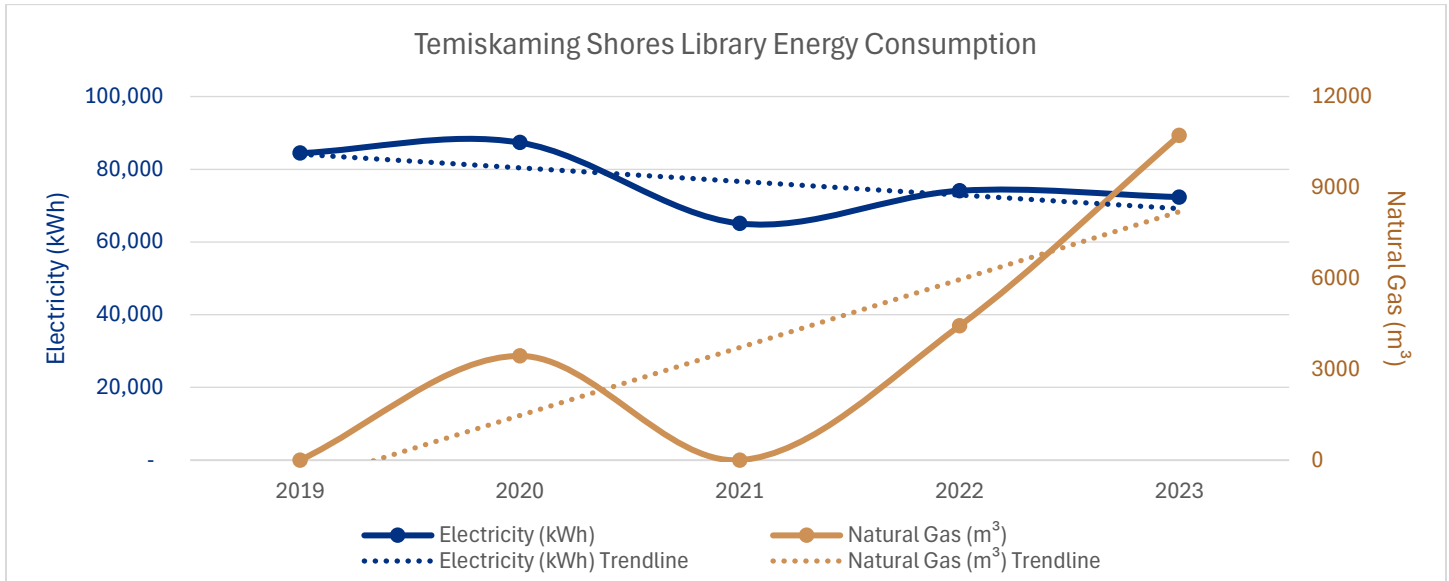
Library Building (Old) – 50 Whitewood Ave W, New Liskeard



Between 2019 and 2023, the Library at 50 Whitewood Ave W had a 100% reduction in energy use and GHG emissions, dropping from 142821.7 kWh and 21.5 tCO₂e to zero. This significant change resulted from the sale of this building in 2021. The City consolidated two library locations into one and relocated to a renovated facility at 285 Whitewood Ave W, now the Temiskaming Shores Library. Beyond conserving energy and lowering costs, this strategy will pave the way for future initiatives for the next five years.

Libraries

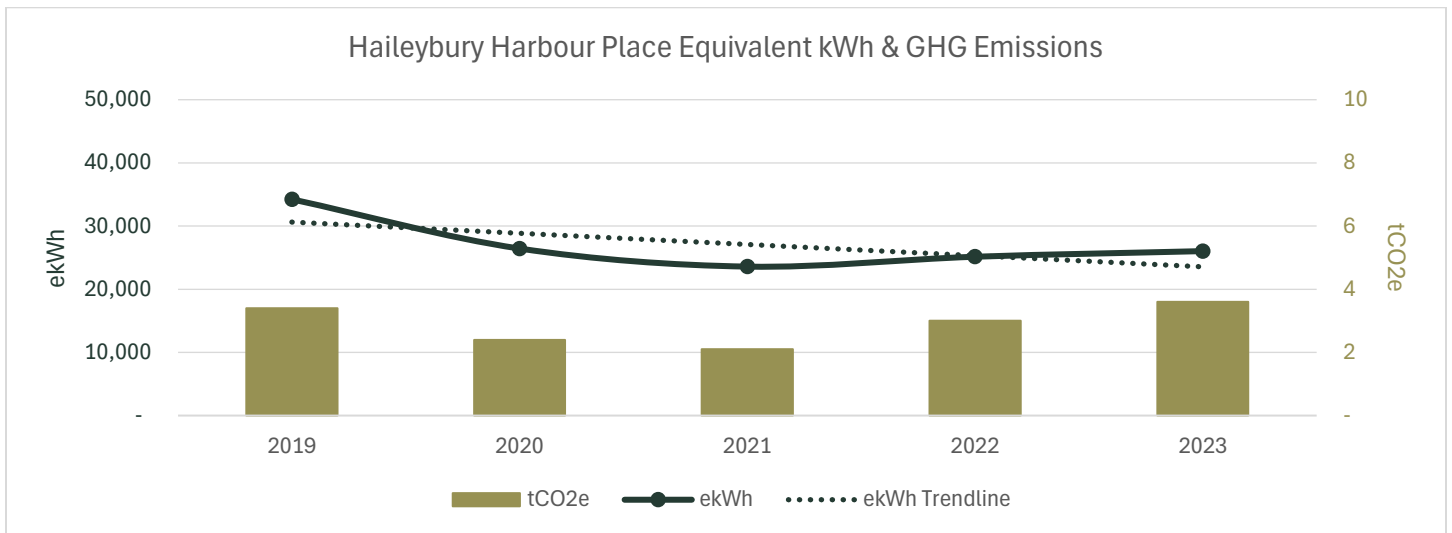
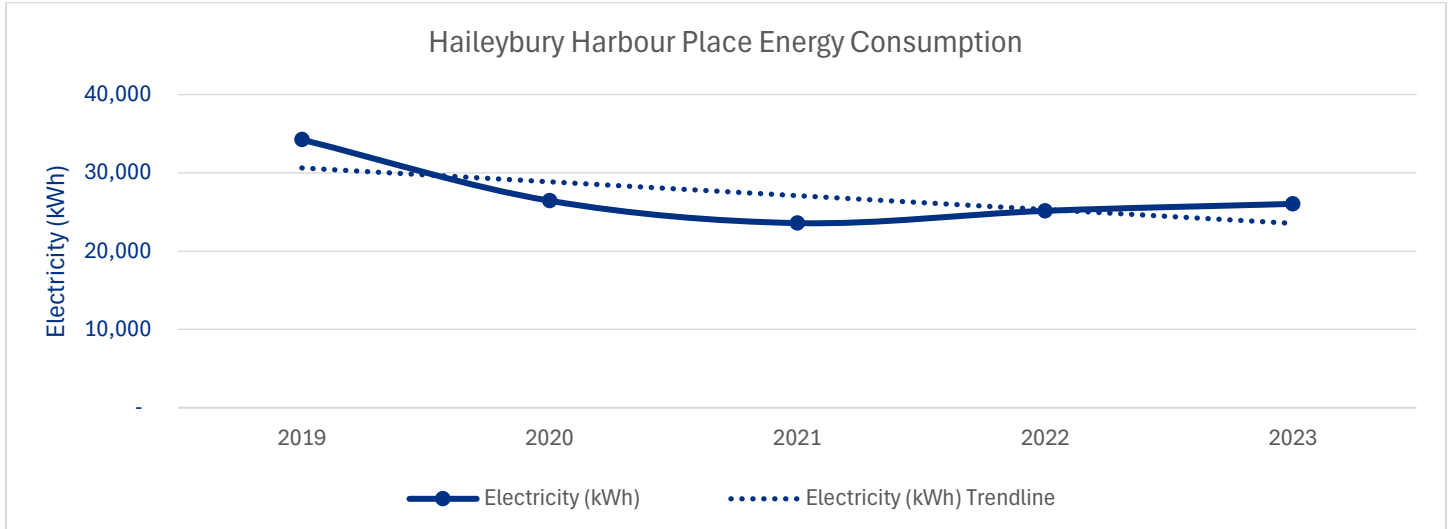
Temiskaming Shores Library – 285 Whitewood Ave W, New Liskeard



Following its 2019 renovation and conversion from the New Liskeard Medical Centre, the Temiskaming Shores Library at 285 Whitewood Ave W saw a 52% rise in energy consumption, from 125,316.4 ekWh to 190,706.42 ekWh, and an 825% increase in GHG emissions, from 2.4 to 22.2 tCO₂e, by 2023. This increase occurred due to a temporary halt in operations during the renovation phase, which included energy efficiency upgrades of a new boiler and LED lighting. In addition, a natural gas meter was installed as part of the renovation, introducing gas service to this location for the first time. This transition consolidated two library branches into this single, more efficient location, conserving energy and reducing costs. The Library is also part of the 2024 Building Decarbonization Feasibility Study with the goal of achieving net zero emissions by 2050, as outlined in the Corporate Greenhouse Gas Reduction Plan. This study, supported by funding through the Federation of Canadian Municipalities under the Green Municipal Fund, will inform future retrofits and energy improvement projects with additional measures to be implemented as funding allows, through 2024-2029.

Marinas

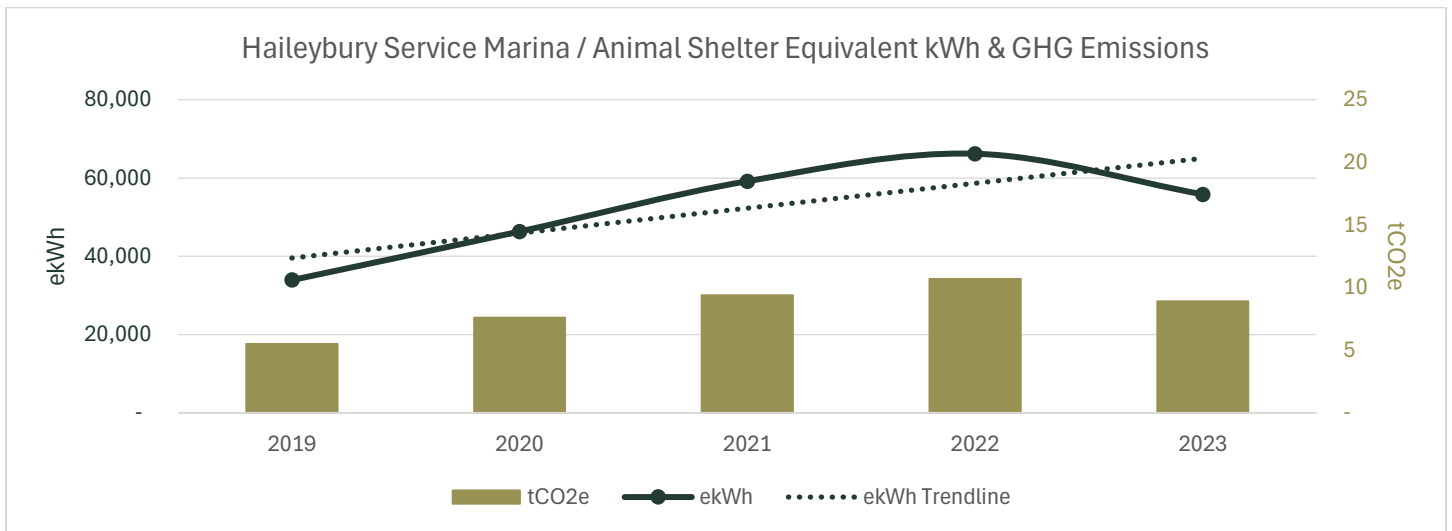
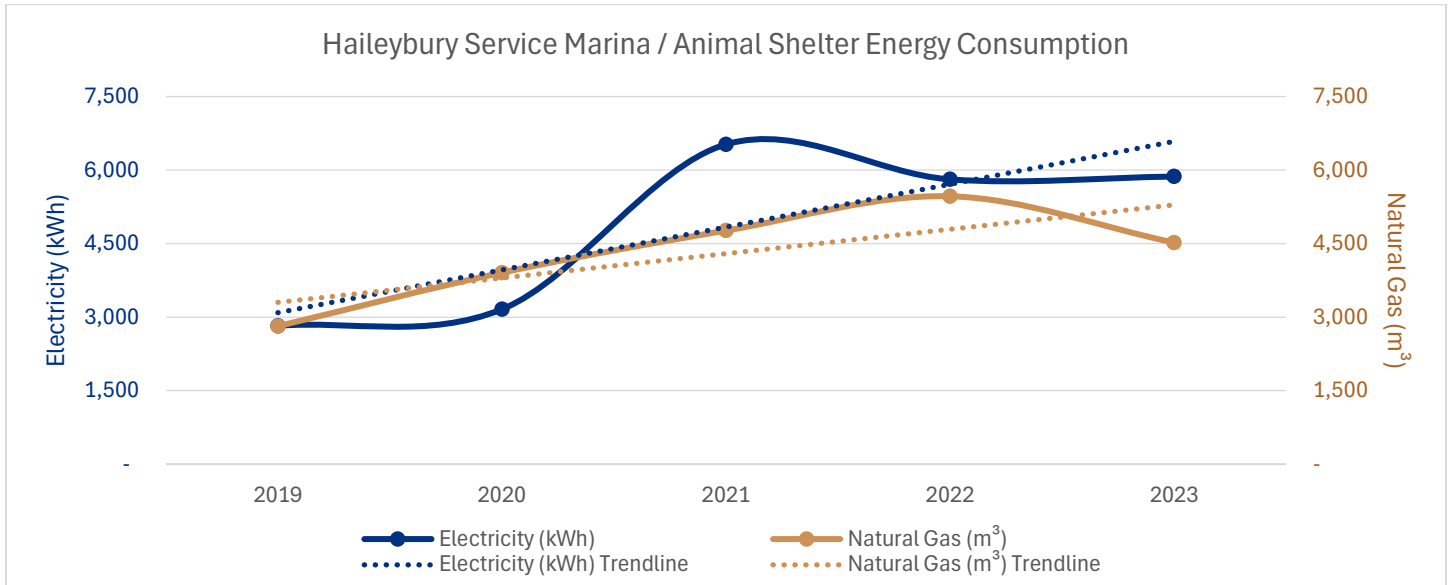
Haileybury Harbour Place – 451 Farr Dr, Haileybury



From 2019 to 2023, Haileybury Harbour Place experienced a 24% reduction in energy consumption, dropping from 34,232.48 ekWh to 26,032.54 ekWh, alongside a slight 6% increase in GHG emissions, from 3.4 to 3.6 tCO2e. Energy conservation efforts will continue as funding becomes available annually, through 2024-2029.

Marinas

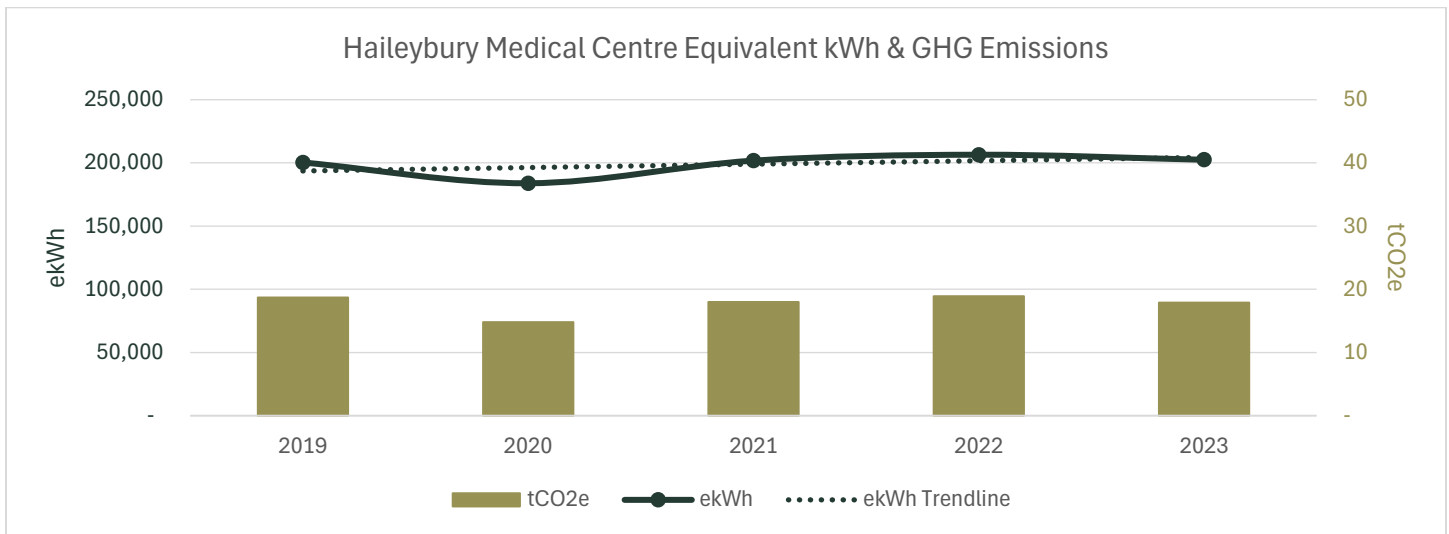
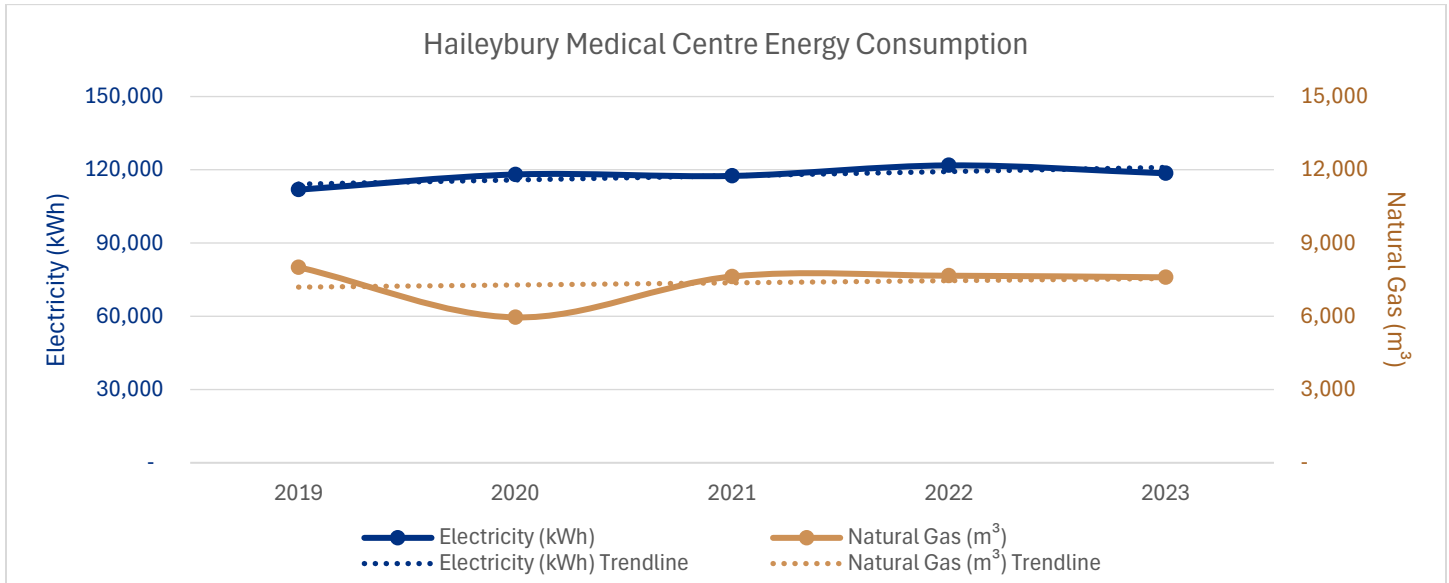
Haileybury Service Marina / Animal Shelter – 305 Farr Dr, Haileybury



Over the past five years, Haileybury Service Marina saw energy use rise by 65%, from 33,931.22 ekWh in 2019 to 55,825.14 ekWh in 2023 and GHG emissions increase by 62%, from 5.5 to 8.9 tCO₂e. With an expansion to include an Animal Shelter in 2024, the facility will undergo renovations and introduce LED lighting upgrades to enhance energy efficiency. Future efforts to reduce energy consumption and emissions will continue as funding becomes available, from 2024-2029.

Medical Centre

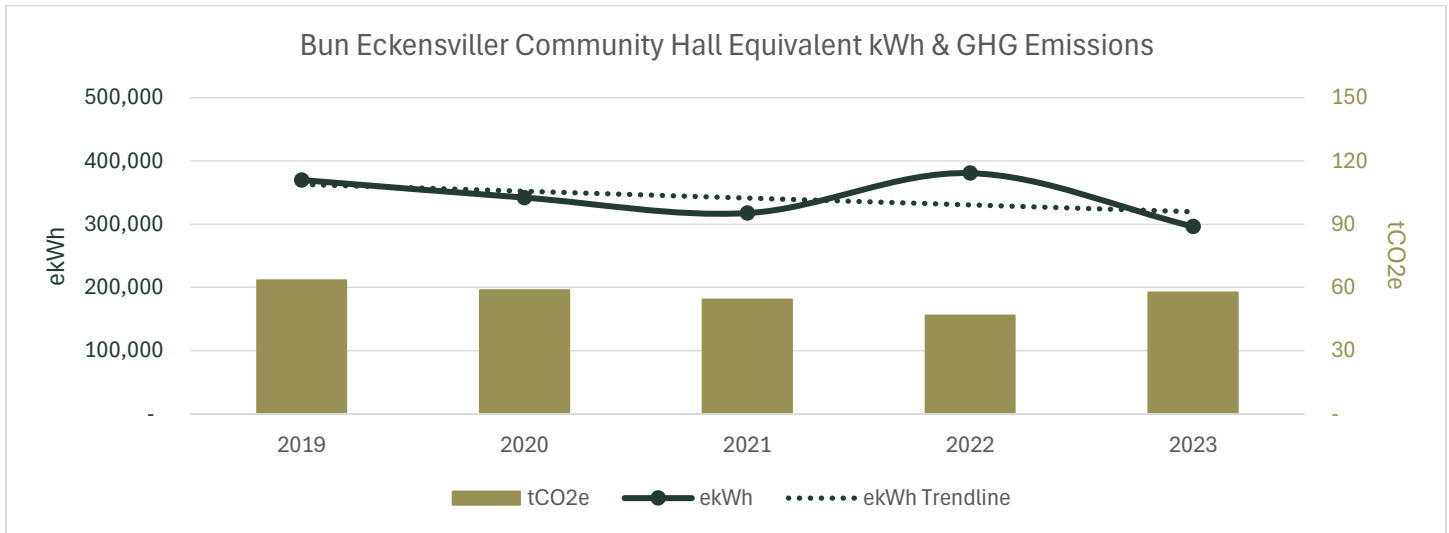
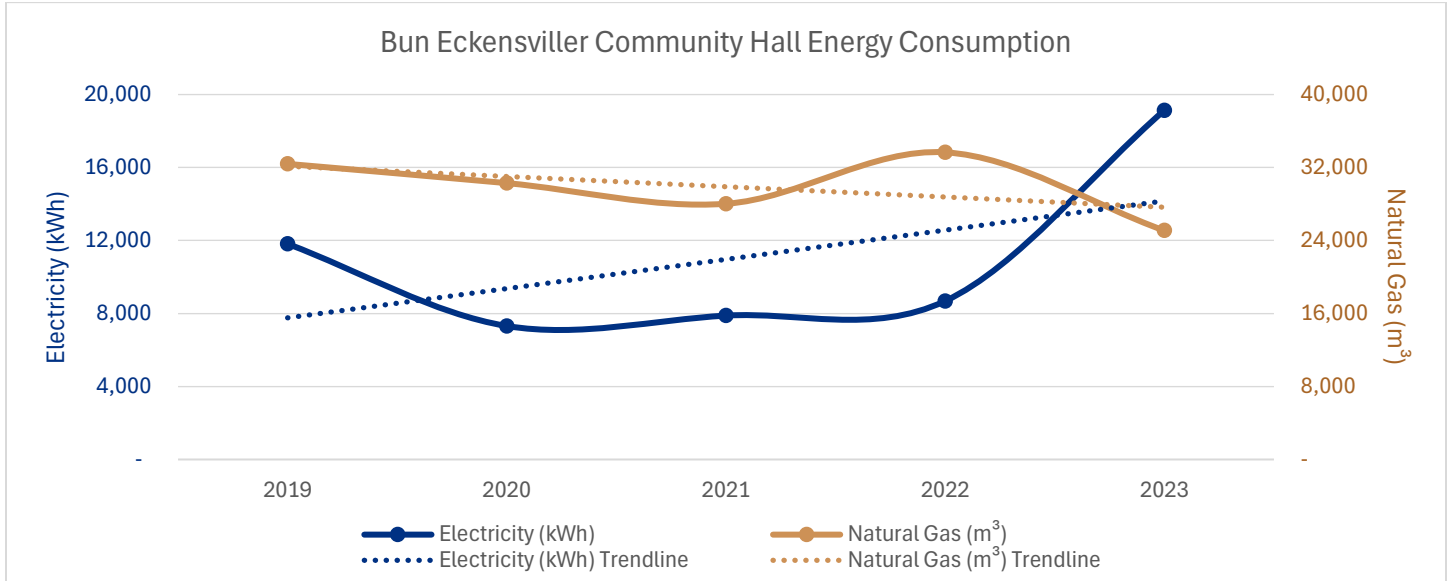
Haileybury Medical Centre – 95 Meridian Ave, Haileybury



Between 2019 and 2023, the Medical Centre slightly increased its energy consumption by 1%, from 200,346.86 ekWh to 202,497.27 ekWh, alongside a 4% reduction in GHG emissions, from 18.7 to 17.9 tCO₂e. This facility is included in the 2024 Building Decarbonization Feasibility Study, targeting net-zero emissions by 2050, as outlined in the Corporate Greenhouse Gas Reduction Plan. The study, with financial support from the Federation of Canadian Municipalities under the Green Municipal Fund, will inform future retrofits and energy-saving initiatives. Efforts to integrate additional energy efficiency measures will continue as funding becomes available, over the next five years.

Other Facilities

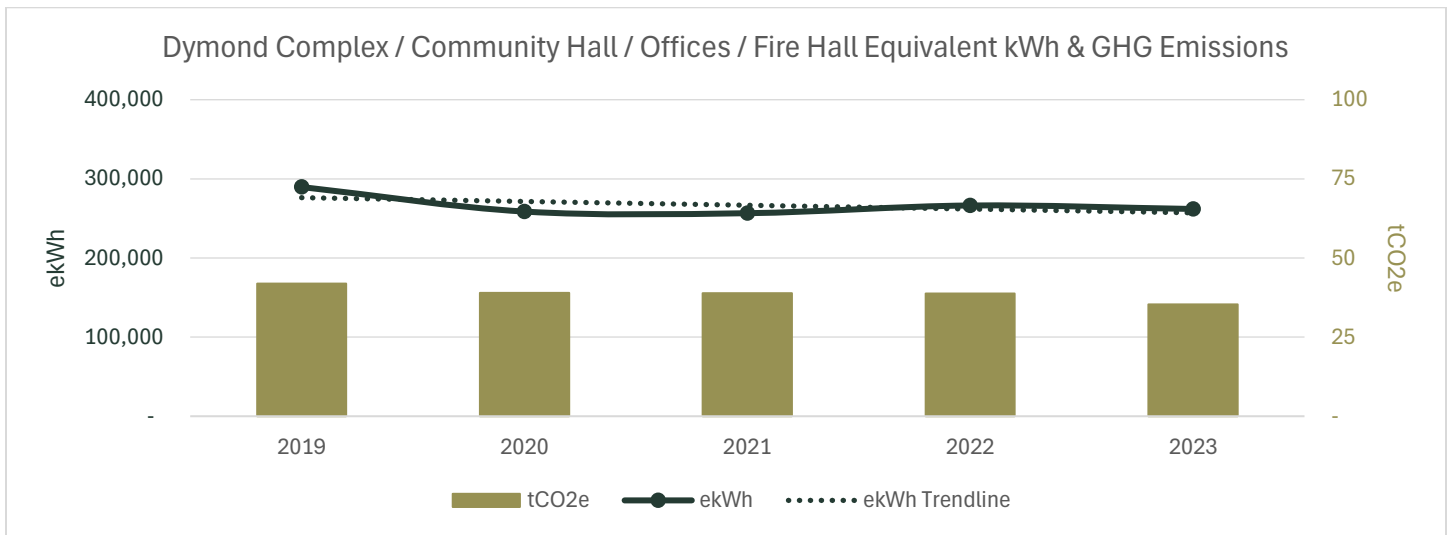
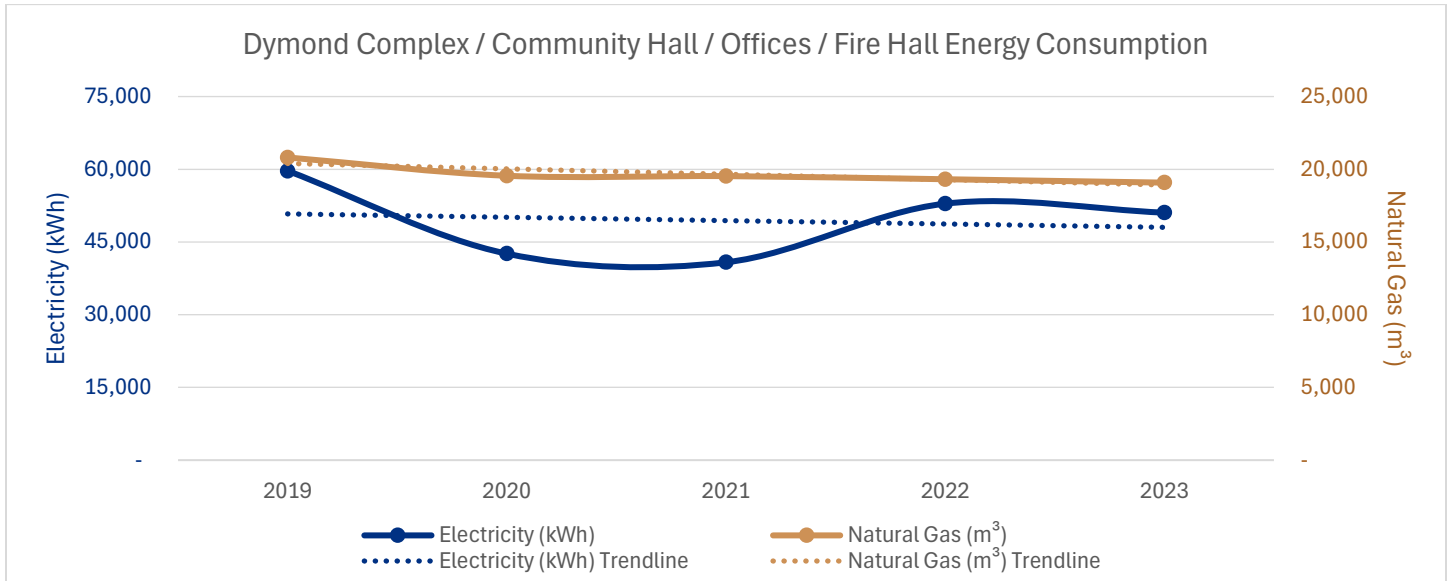
Bun Eckensviller Community Hall – 90 Whitewood Ave W, New Liskeard



In the past five years, the Bun Eckensviller Community Hall has experienced a 20% reduction in energy consumption, from 369,807.48 kWh in 2019 to 296,406.24 kWh in 2023, and a 9% decrease in GHG emissions, from 63.4 to 57.6 tCO₂e. Looking ahead to 2024–2029, efforts will continue in implementing new energy-saving measures as funding becomes available.

Other Facilities

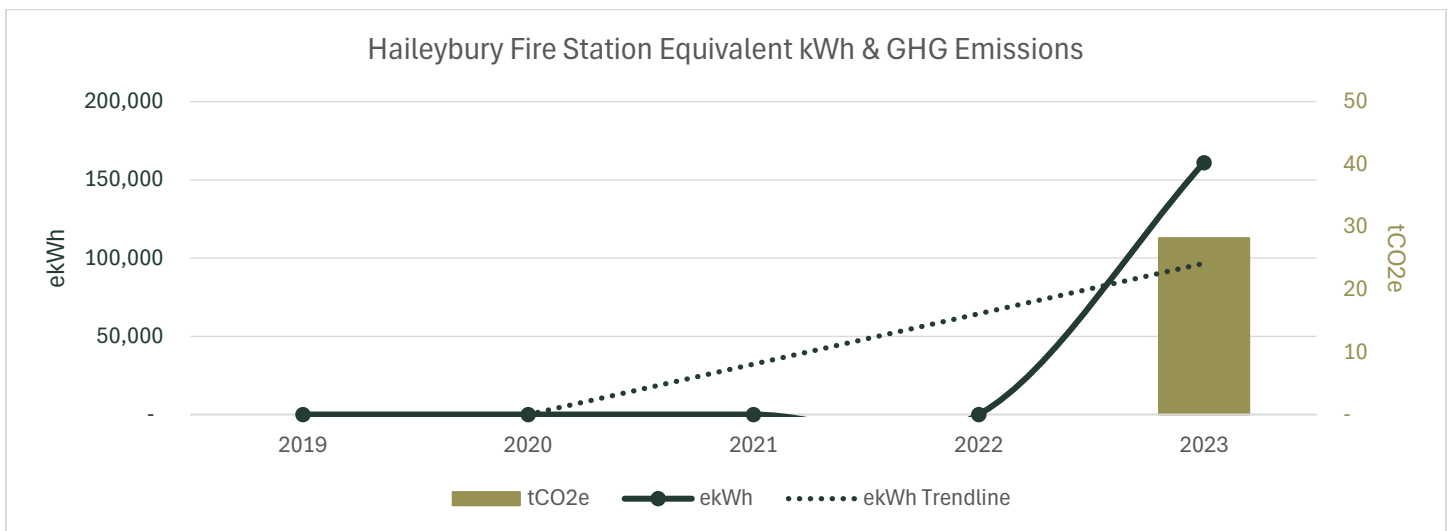
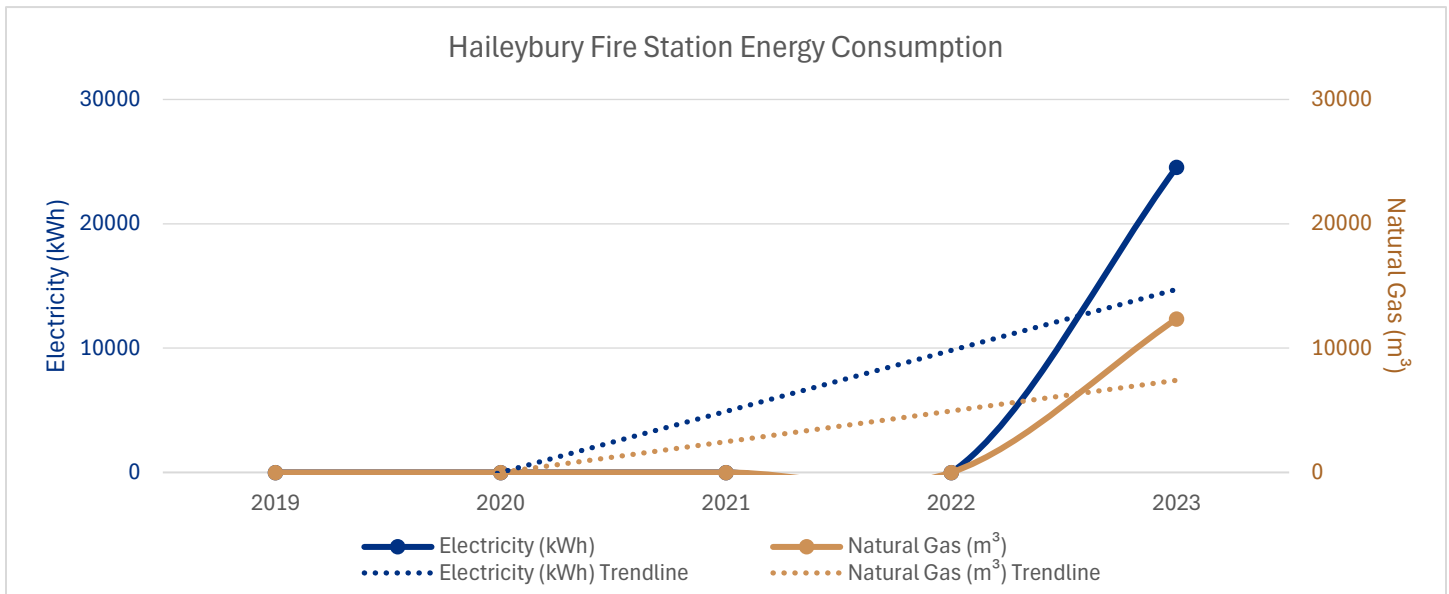
Dymond Complex / Community Hall / Offices / Fire Hall – 181 Drive in Theatre Rd, New Liskeard



The Dymond Complex saw a 10% decrease in energy use from 289,641.47 ekWh in 2019 to 261,898.9 ekWh in 2023, alongside a 16% reduction in GHG emissions from 41.9 to 35.3 tCO₂e. This facility is part of the Building Decarbonization Feasibility Study to achieve net zero emissions by 2050. The initiative, supported by the Federation of Canadian Municipalities under the Green Municipal Fund, will inform future energy-saving retrofits and projects. Moving forward into 2024-2029, additional energy conservation measures will be implemented as annual funding becomes available.

Other Facilities

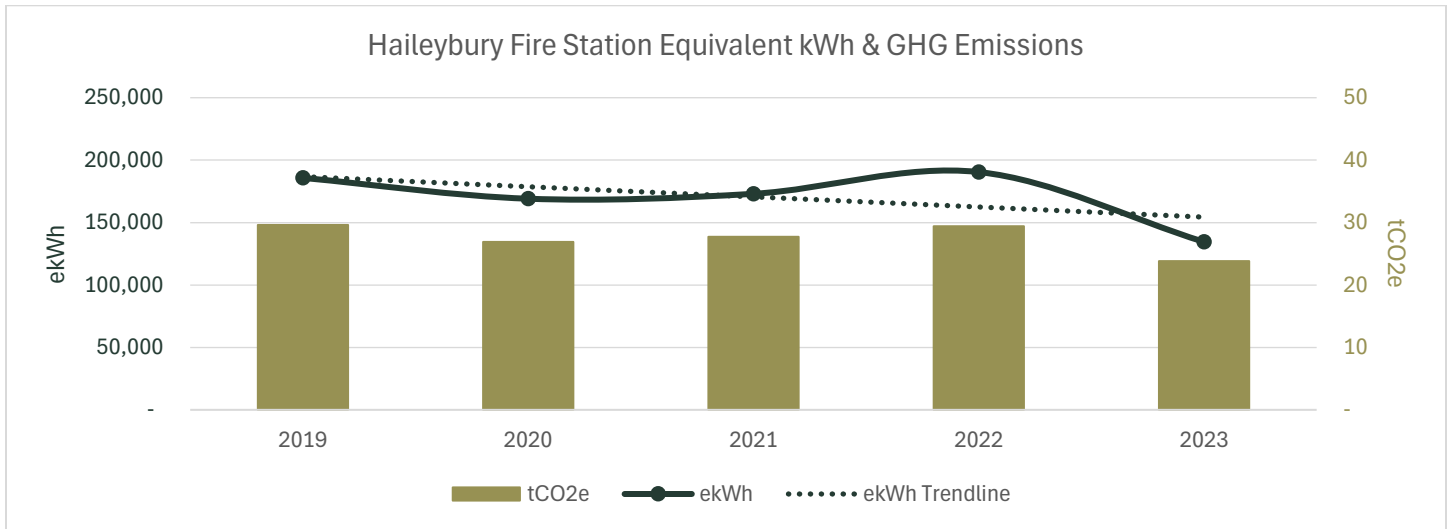
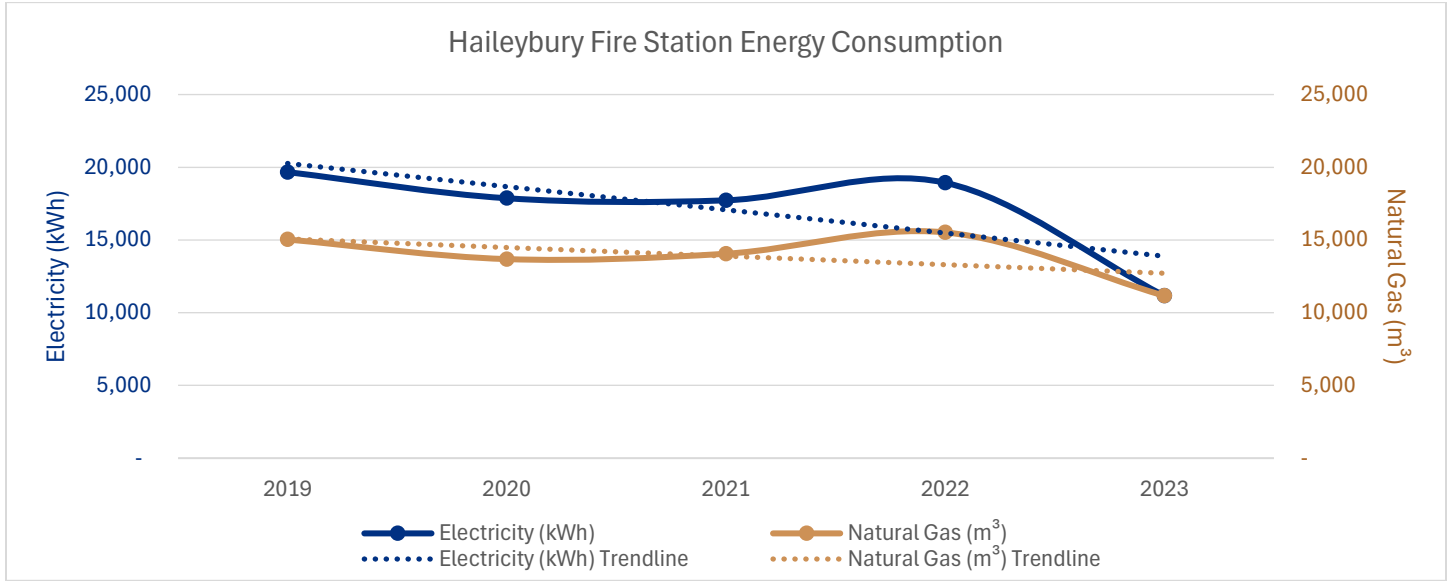
Haileybury Fire Station – 54 Rorke Ave, Haileybury



In 2023, the new Haileybury Fire Station at 54 Rorke Ave consumed 161,020.94 ekWh of energy and emitted 28.2 tCO₂e. Built in 2022, this facility replaced the former fire station at 468 Georgina Ave, which was sold in 2024. The facility will be part of the 2024 Building Decarbonization Feasibility Study to explore pathways towards net-zero emissions by 2050, in line with the Corporate Greenhouse Gas Reduction Plan. This study, supported by the Federation of Canadian Municipalities under the Green Municipal Fund, will inform future retrofits and energy projects, with further measures implemented as funding is available, through 2024-2029.

Other Facilities

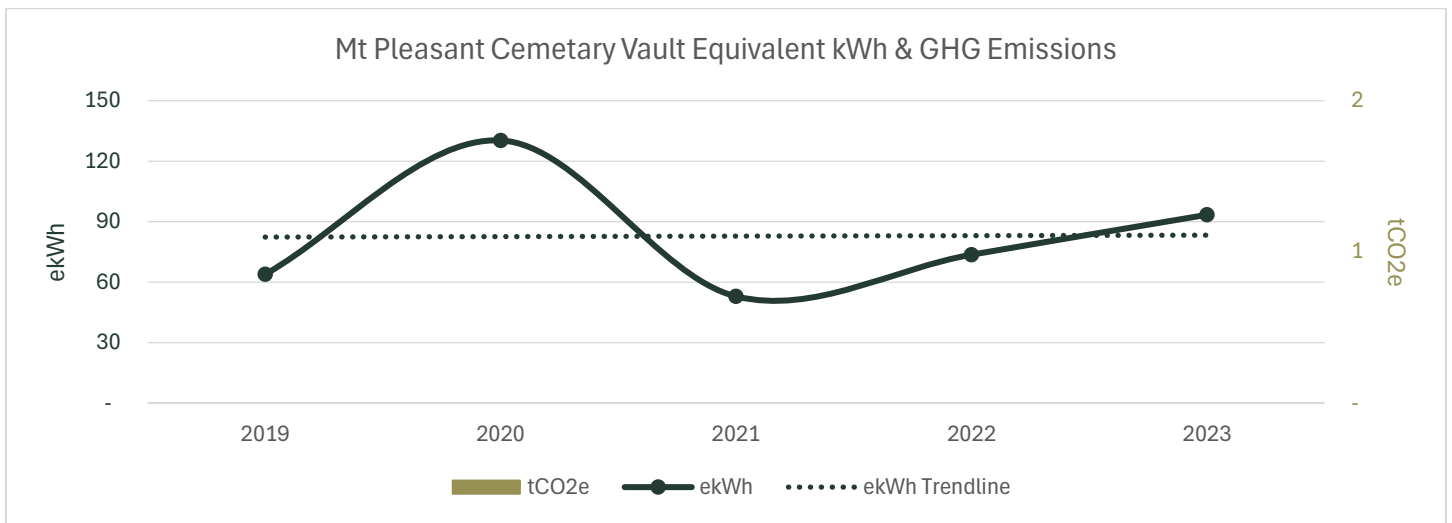
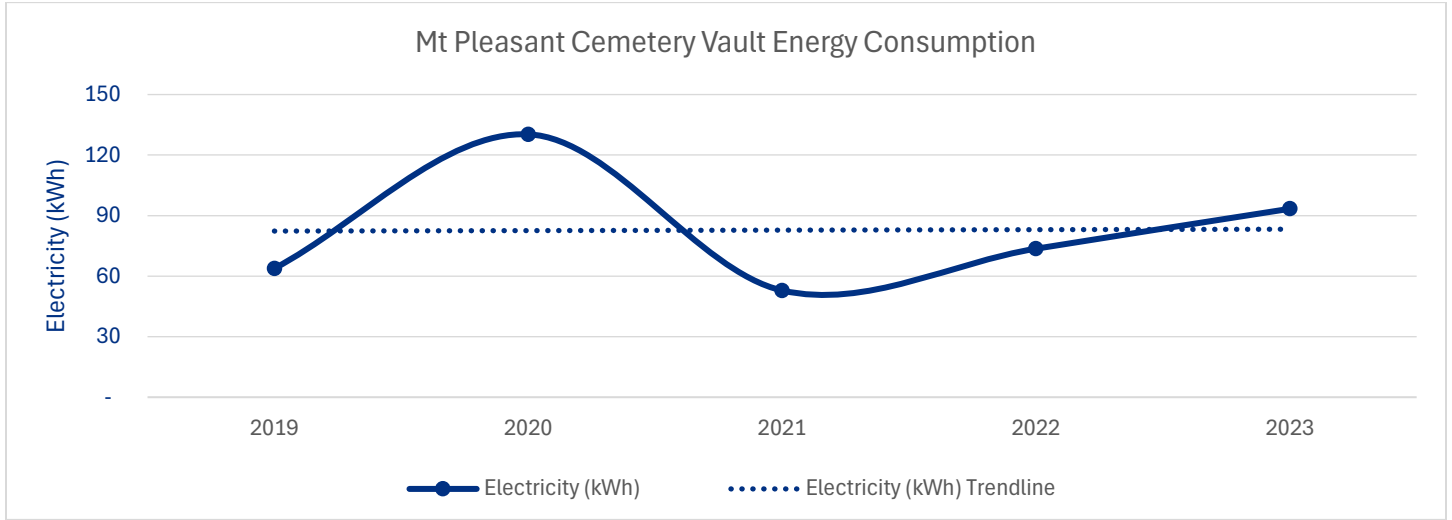
Haileybury Fire Station (Old) – 468 Georgina Ave, Haileybury



The Haileybury Fire Station at 468 Georgina Ave experienced a 28% reduction in energy use, from 185,771.84 ekWh in 2019 to 134,537.69 ekWh in 2023, and a 20% decrease in GHG emissions, from 29.6 to 23.8 tCO₂e. In 2024, the facility was sold, and fire station operations were relocated to a newly constructed, more efficient building at 54 Rorke Ave.

Other Facilities

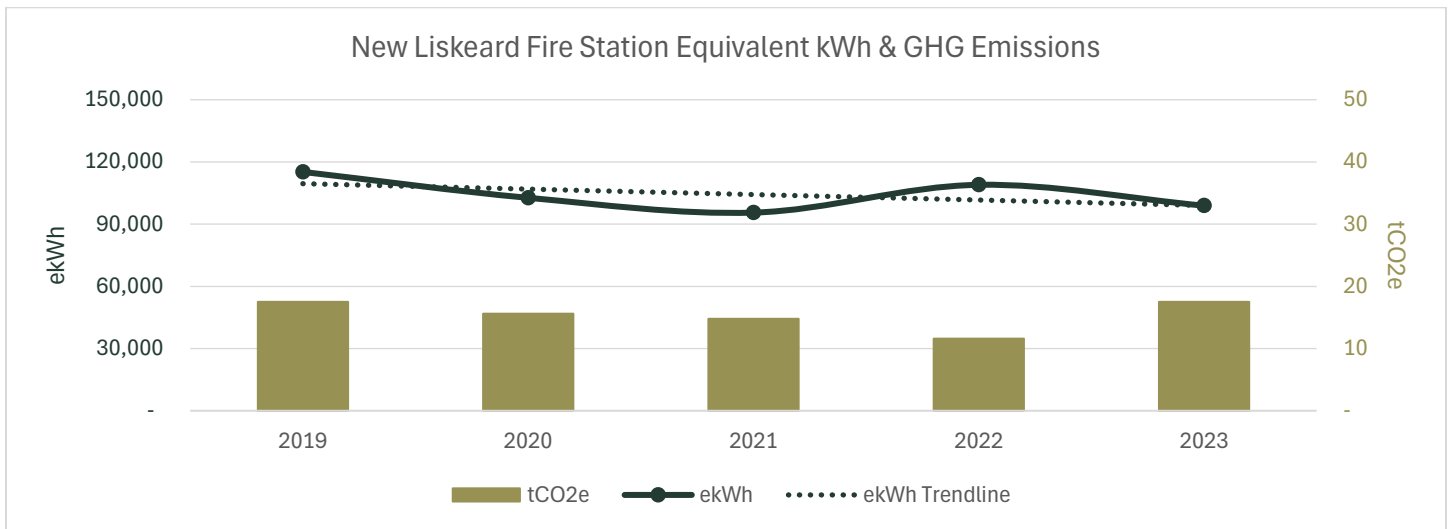
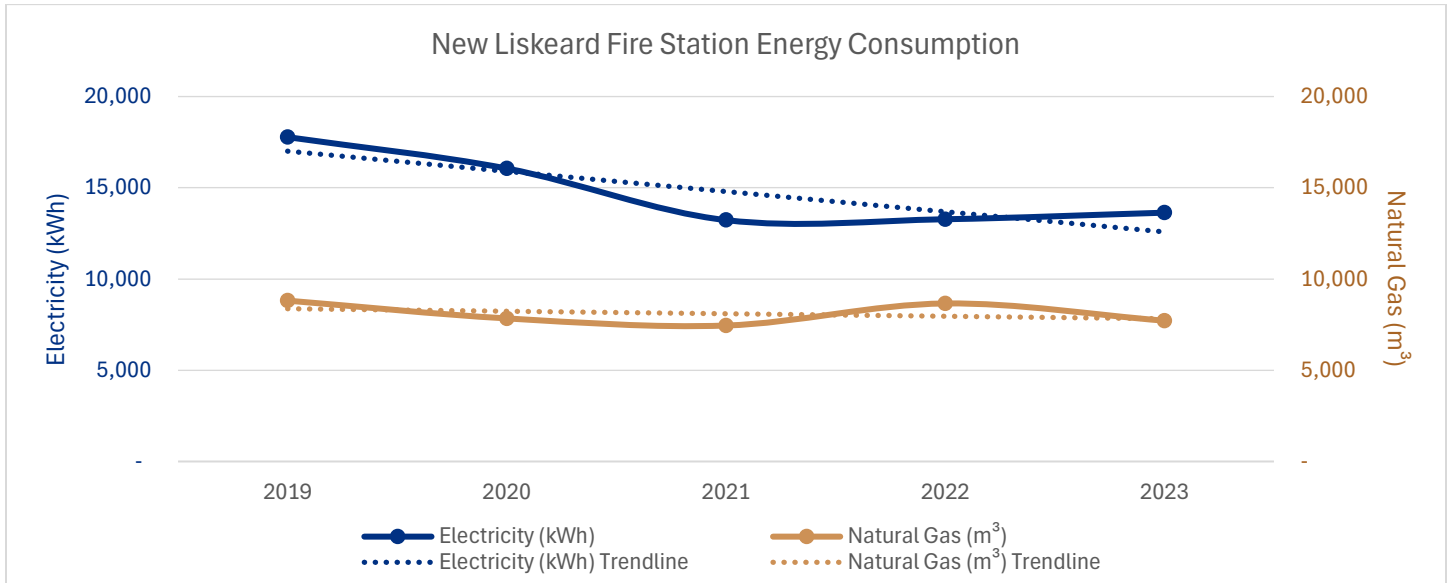
Mt Pleasant Cemetery Vault – 350 Morissette Dr, Haileybury



From 2019 to 2023, the Mt Pleasant Cemetery Vault saw a 46% increase in energy consumption, from 63.85 ekWh to 93.37 ekWh, while GHG emissions remained stable at 0.01 tCO2e throughout this period. Future measures to reduce energy consumption will continue as funding becomes available in the next five years.

Other Facilities

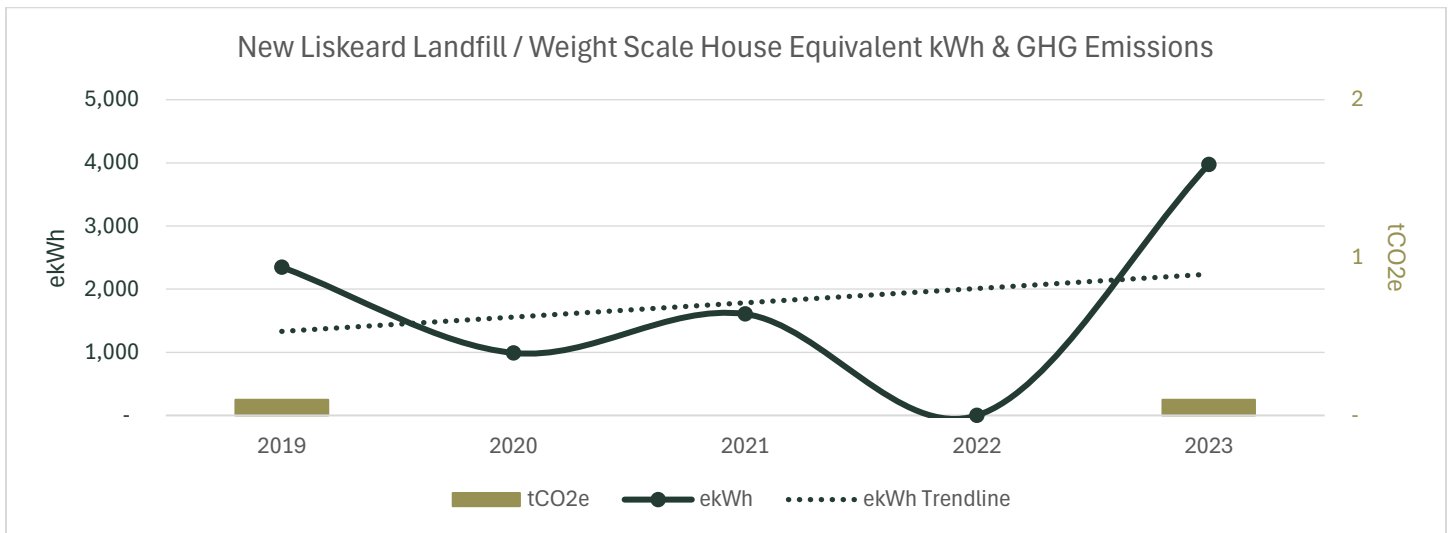
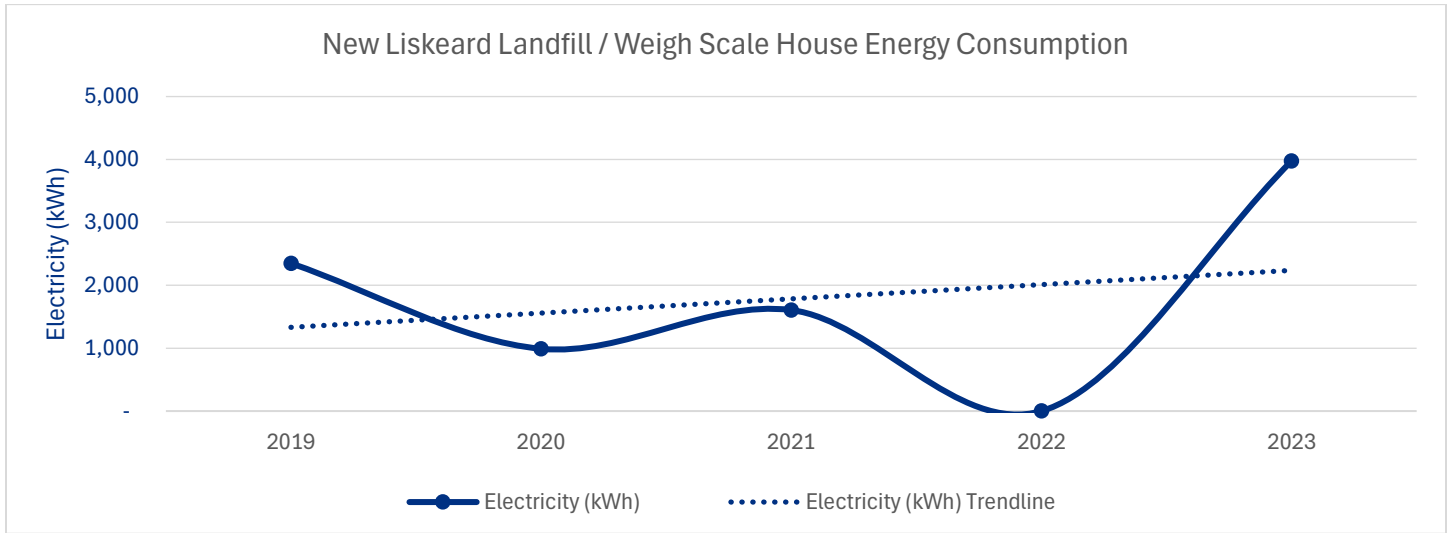
New Liskeard Fire Station – 30 Wellington St S, New Liskeard



Over the past five years, the New Liskeard Fire Station has reduced its energy use by 14% from 115,174 ekWh in 2019 to 98,908.62 ekWh in 2023, while its GHG emissions remained stable at 17.5 tCO₂e. This facility is part of the 2024 Building Decarbonization Feasibility Study, with the goal to achieve net zero emissions by 2050, in line with the Corporate Greenhouse Gas Reduction Plan. The study, supported by the Federation of Canadian Municipalities under the Green Municipal Fund, will inform future retrofits and energy improvement projects. Efforts to reduce energy consumption and emissions will continue as funding becomes available, through 2024-2029.

Other Facilities

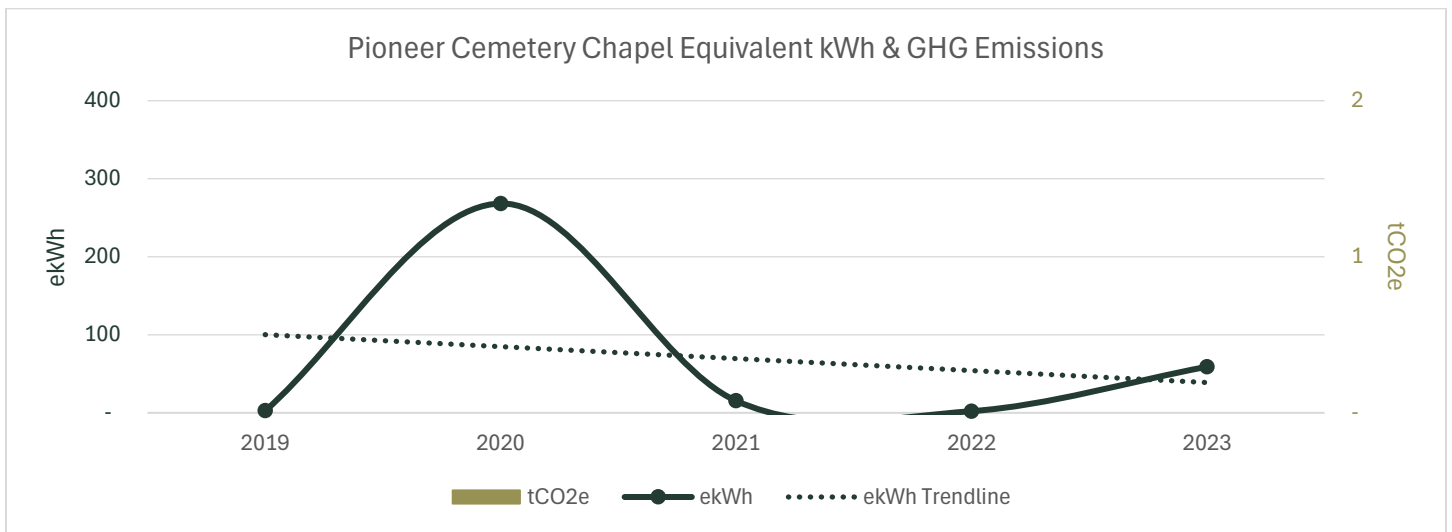
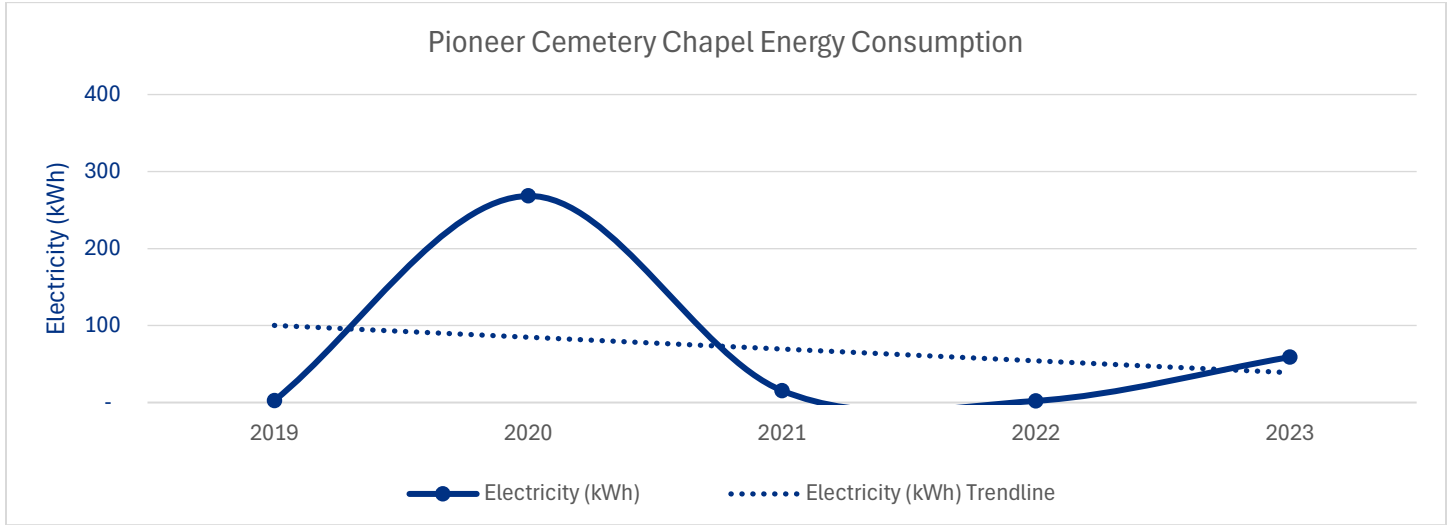
New Liskeard Landfill / Weigh Scale House – 704165 Rockley Rd, New Liskeard



From 2019 to 2023, the Landfill/Weigh Scale House saw a 69% rise in energy use from 2,348.52 ekWh to 3,975.09 ekWh, while GHG emissions remained constant at 17.5 tCO2e. The landfill re-opened in 2023 with a newly constructed weigh scale house to replace the old building. Additionally, a sizable storage shed equipped with electric heating was built. Moving forward into 2024-2029, further energy management measures will be adopted as funding becomes available.

Other Facilities

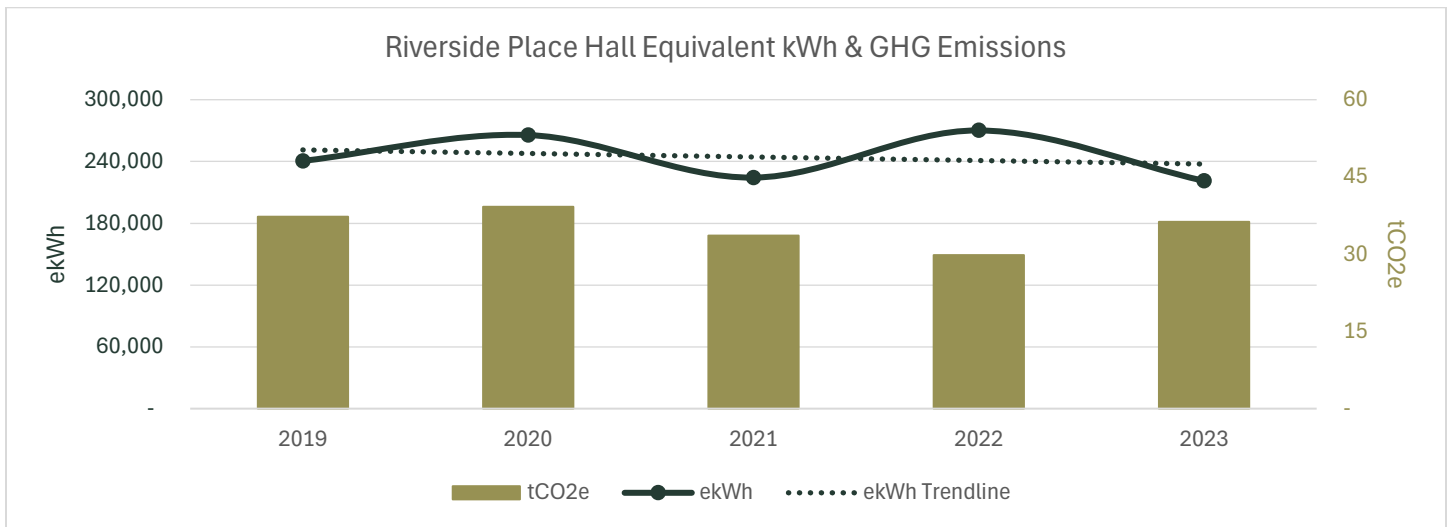
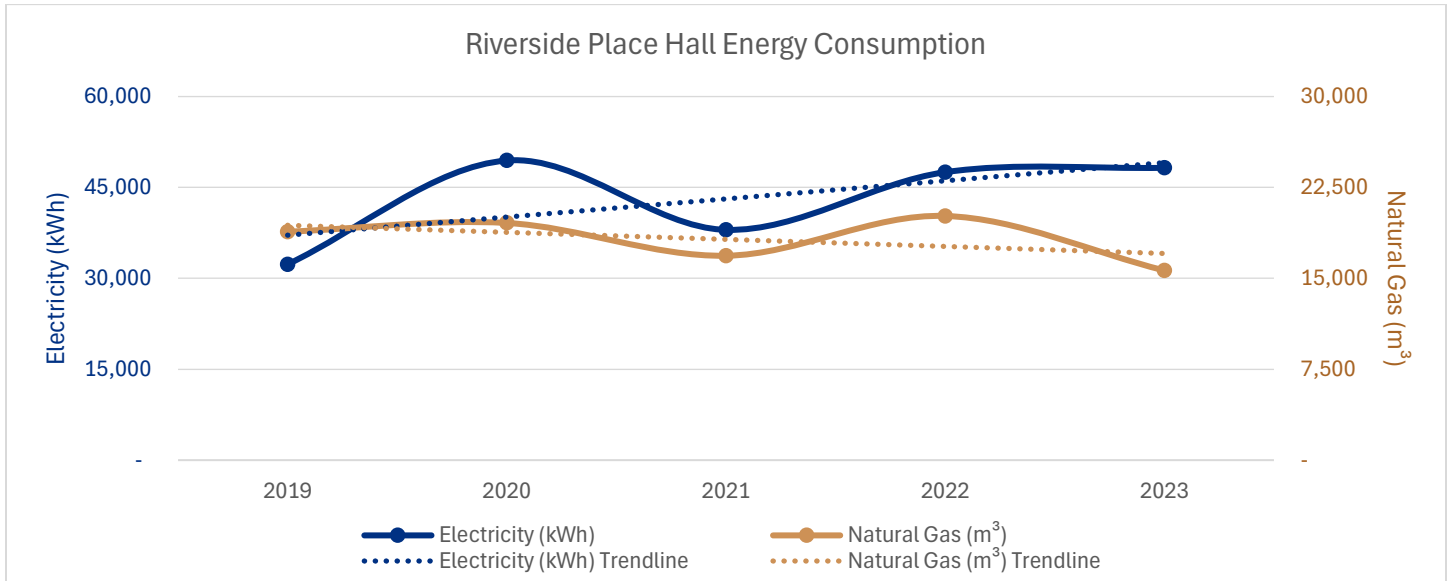
Pioneer Cemetery Chapel – 500 Whitewood Ave W, New Liskeard



The Pioneer Cemetery Chapel experienced a 2153% increase in energy consumption, from 2.62 ekWh in 2019 to 59.02 ekWh in 2023, with GHG emissions remaining stable at 0.01 tCO₂e. Future efforts to reduce energy consumption will continue as funding becomes available, through 2024-2029.

Other Facilities

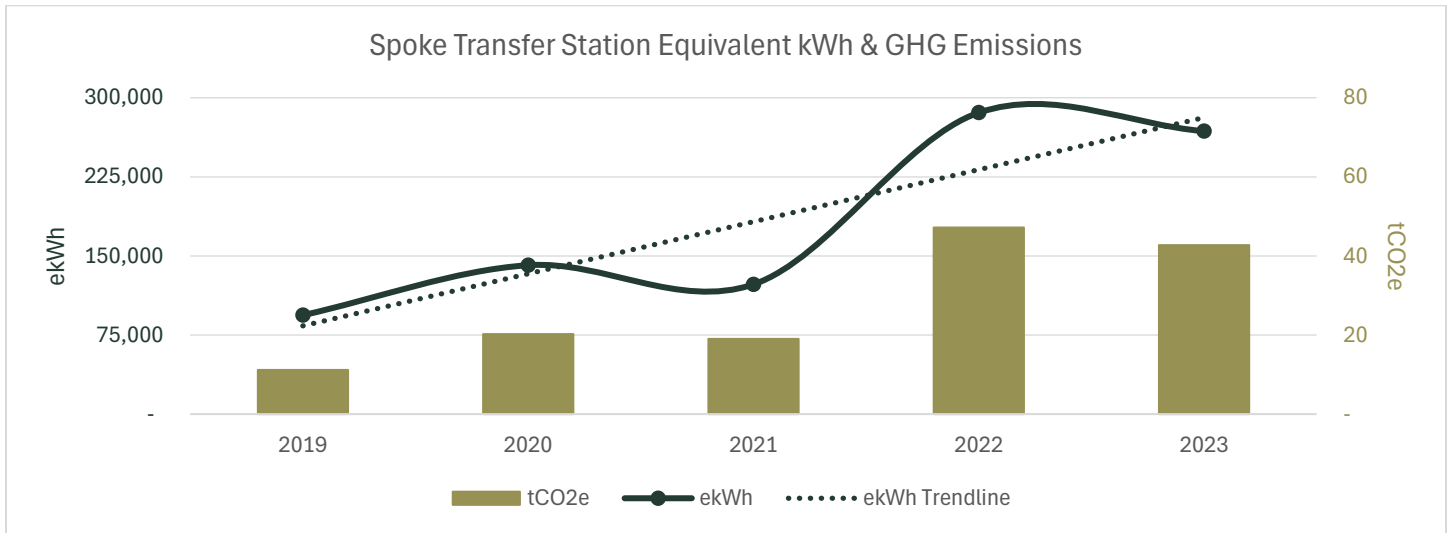
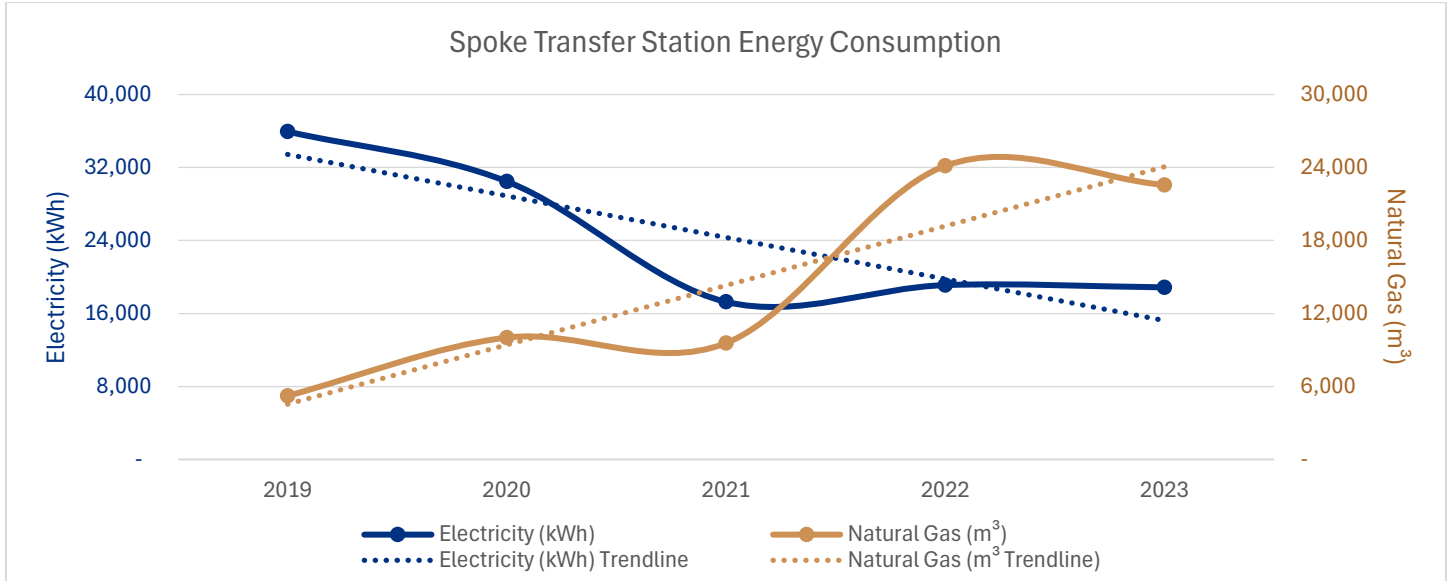
Riverside Place Hall – 55 Riverside Dr, New Liskeard



Between 2019 and 2023, Riverside Place Hall saw an 8% reduction in energy use, from 240,566.53 ekWh to 221,175.53 ekWh, and a 3% decrease in GHG emissions, from 37.3 to 36.3 tCO₂e. This facility is part of the 2024 Building Decarbonization Feasibility Study, targeting net-zero emissions by 2050, consistent with the Corporate Greenhouse Gas Reduction Plan. The study, supported by the Federation of Canadian Municipalities under the Green Municipal Fund, will inform retrofitting and energy improvement efforts. Future energy-saving measures will be implemented as additional funding becomes available, through 2024-2029.

Other Facilities

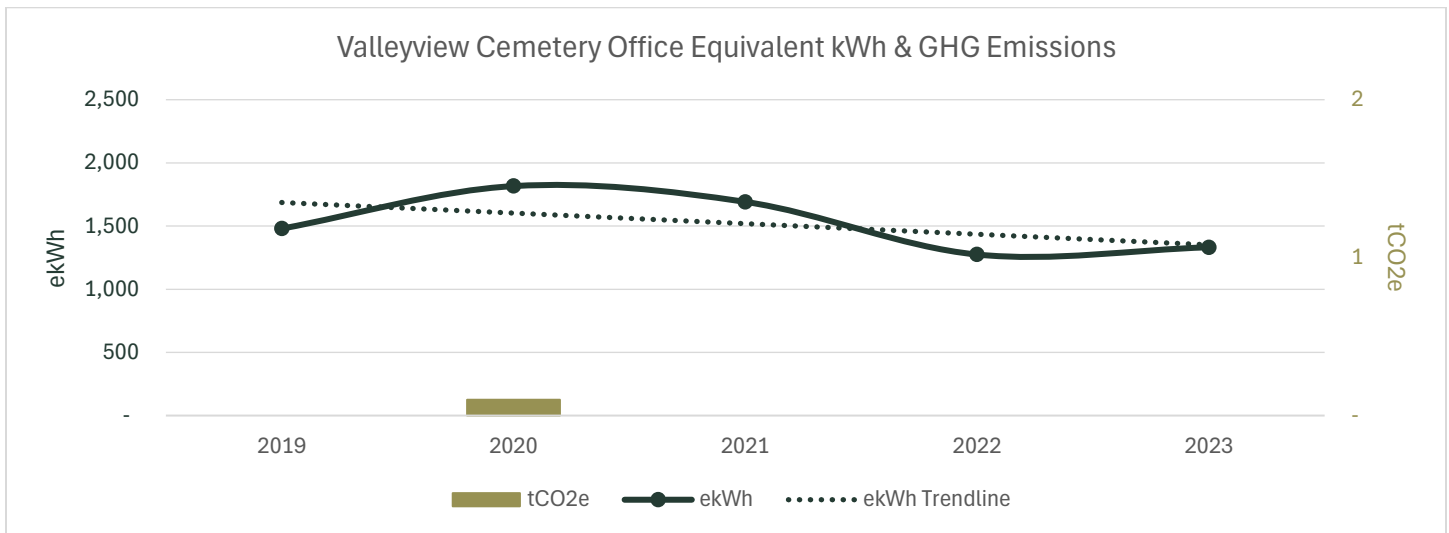
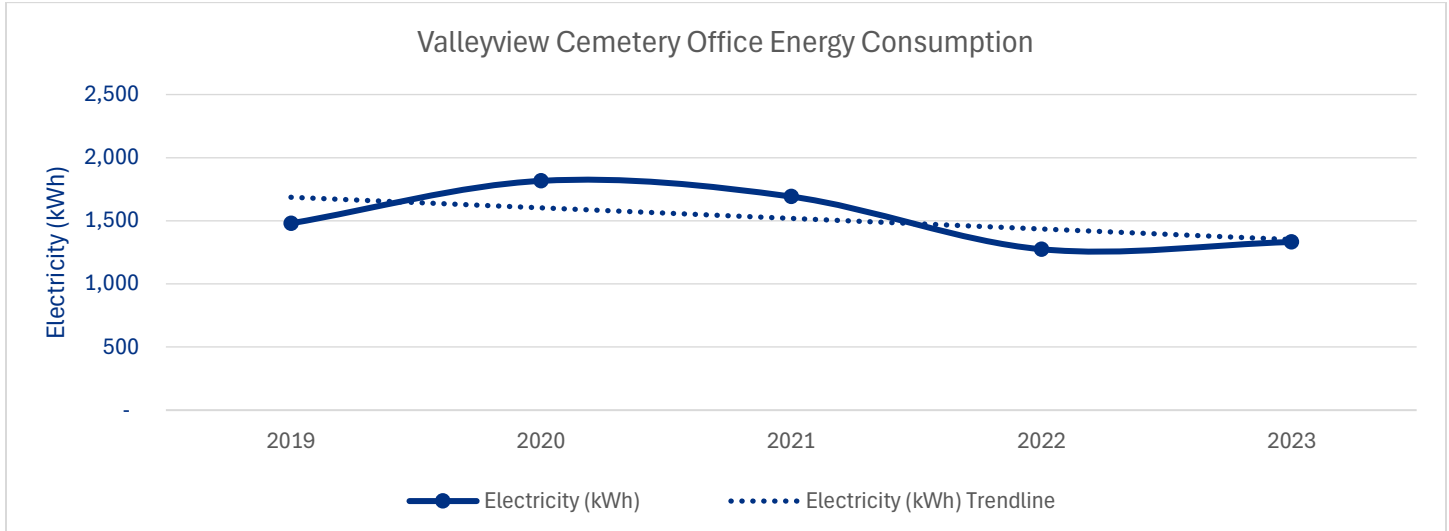
Spoke Transfer Station – 7 Barr Dr, New Liskeard



Over the past five years, the Spoke Transfer Station experienced an increase of 186% in energy consumption, from 93,796.31 ekWh to 268,269.37 ekWh, and GHG emissions rose by 281%, from 11.2 to 42.7 tCO₂e. Moving forward into 2024-2029, energy conservation and emissions reduction measures will be implemented as funding becomes available annually. However, the future of this building may be subject to change with the implementation of full producer responsibility for recycling in Ontario.

Other Facilities

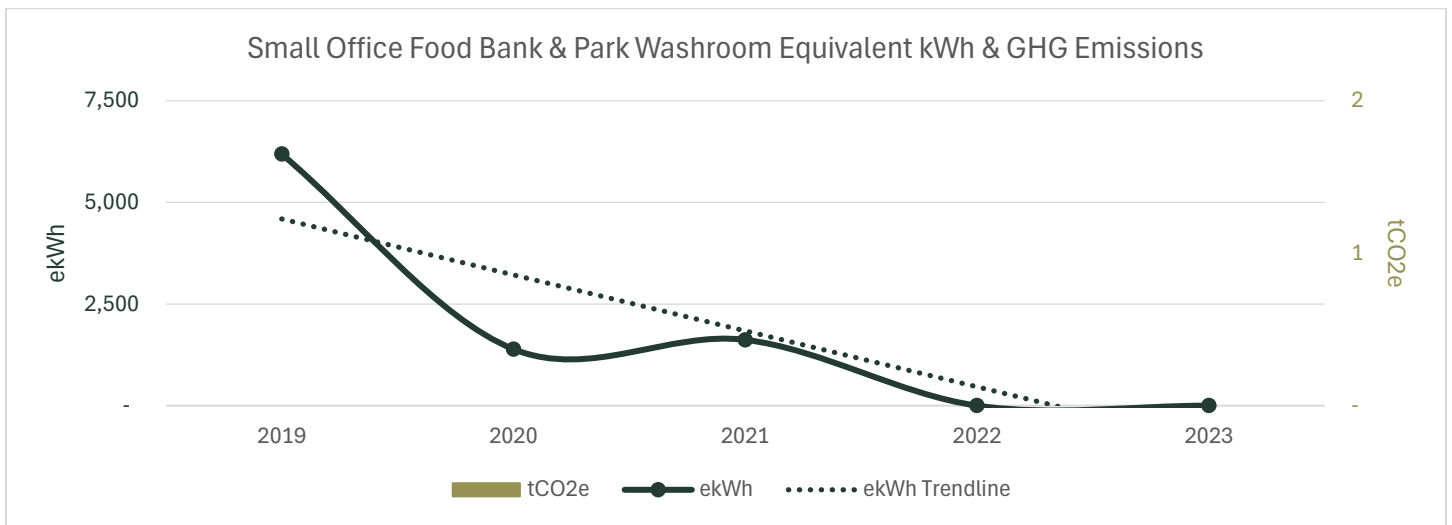
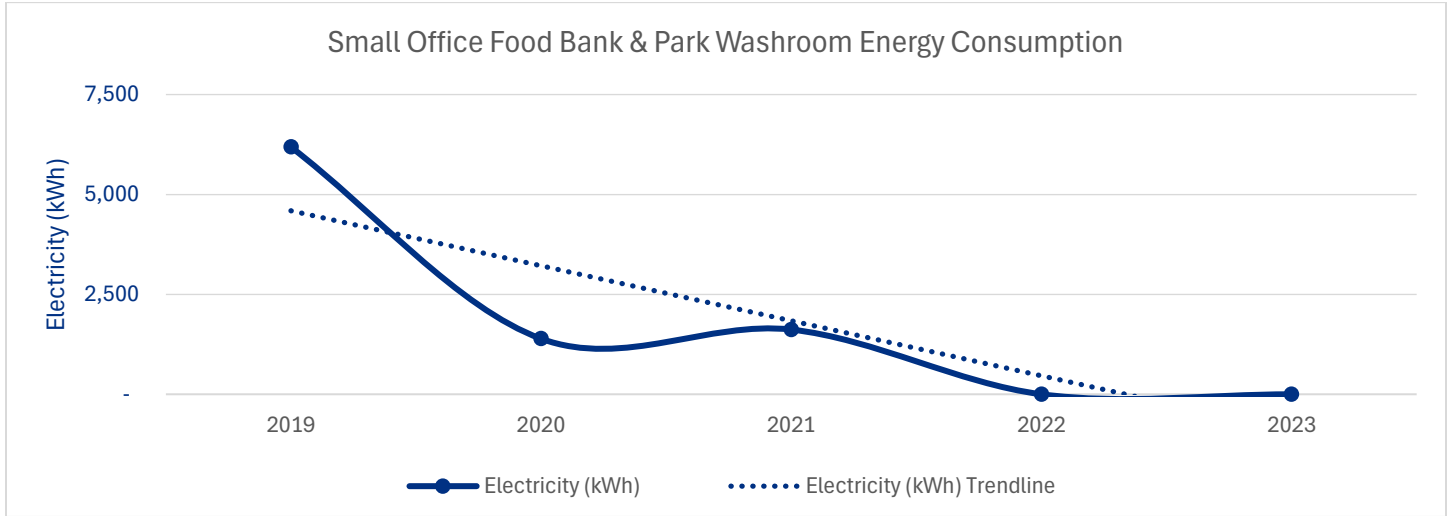
Valleyview Cemetery Office – 30 Shepherdson Rd, New Liskeard



The Valleyview Cemetery Office achieved a 10% reduction in energy consumption, from 1,479.84 ekWh in 2019 to 1,331.98 ekWh in 2023, while GHG emissions remained stable at 0.15 tCO2e throughout this period. Efforts to reduce energy consumption will continue as funding becomes available in the next five years.

Parks

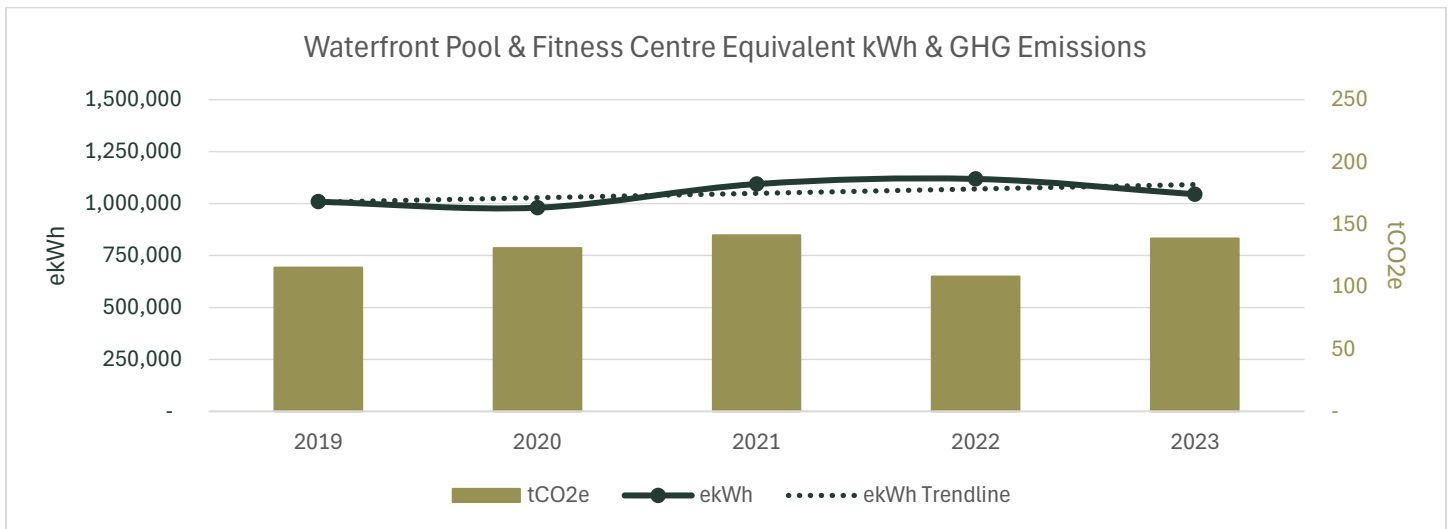
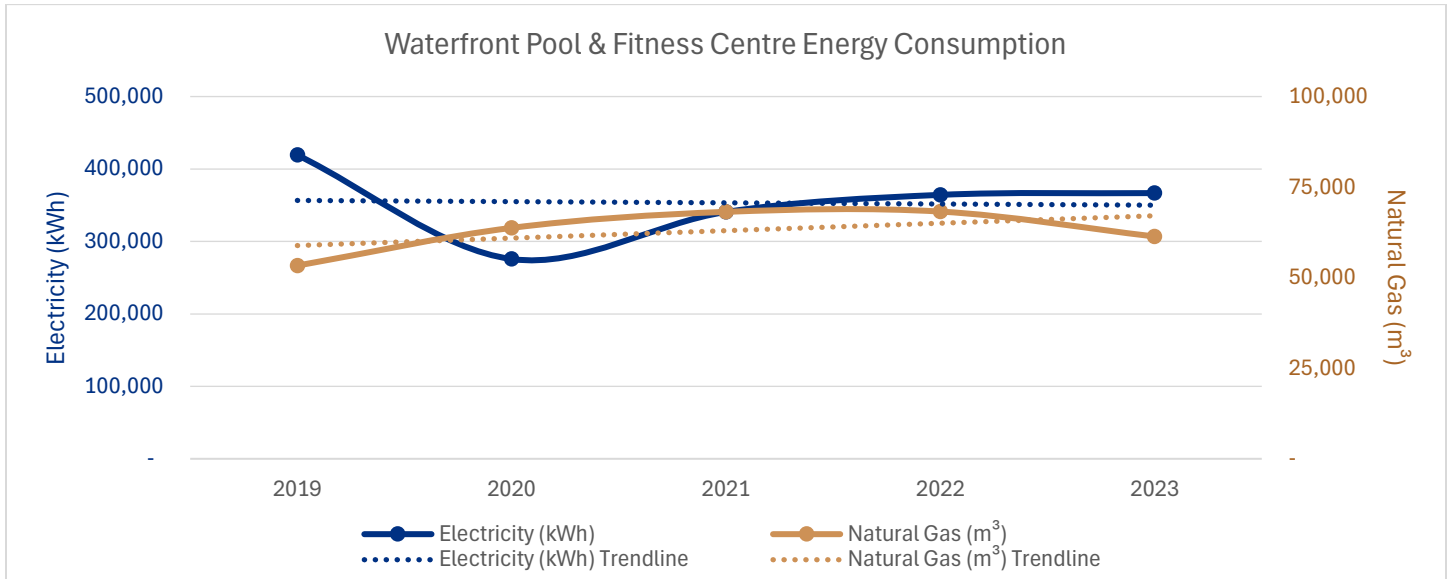
Small Office Food Bank & Park Washroom – 400 Morissette Dr, Haileybury



The Small Office Food Bank & Park Washroom facility eliminated its energy use entirely, going from 6,185.86 ekWh in 2019 to zero in 2023, while GHG emissions decreased from 0.68 tCO2e to zero. This 100% decrease in energy consumption was the result of the building's demolition in 2022.

Pool and Fitness Centre

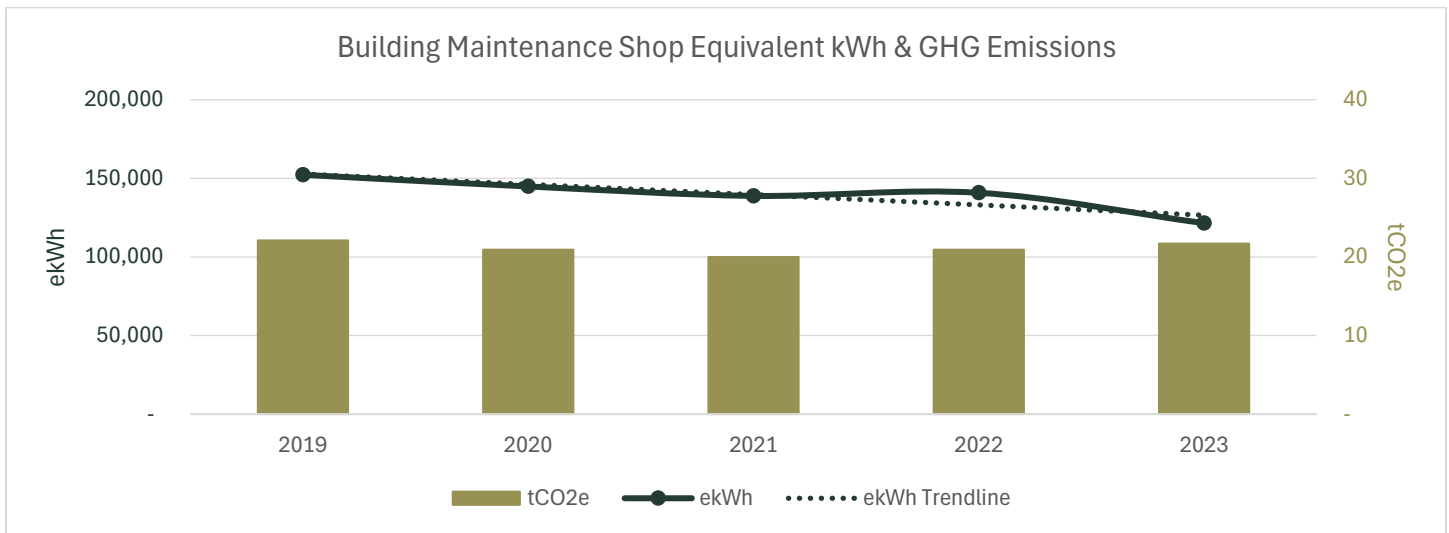
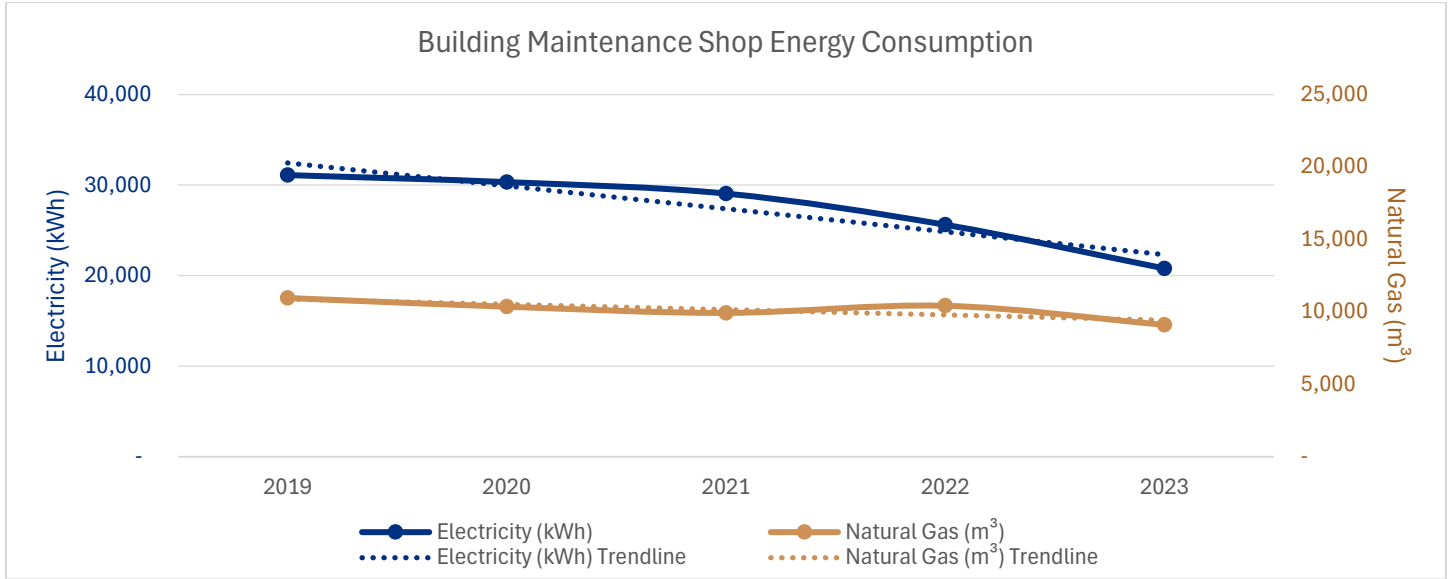
Waterfront Pool & Fitness Centre – 77 Wellington St S, New Liskeard



Between 2019 and 2023, the Waterfront Pool & Fitness Centre experienced a 4% rise in energy use, from 1,008,594.66 ekWh to 1,044,851.97 ekWh, and a 20% increase in GHG emissions, from 115.2 to 138.7 tCO₂e. Notably, patron usage increased substantially during this period, with average monthly attendance in 2023 up by 38% compared to 2019. The facility underwent a roof replacement in 2022 and is part of the 2024 Building Decarbonization Feasibility Study to chart a path towards net-zero emissions by 2050, aligning with the Corporate Greenhouse Gas Reduction Plan. This study, with support from the Federation of Canadian Municipalities under the Green Municipal Fund, will inform future energy-saving retrofits and projects. Additional energy conservation measures will be implemented as funding becomes available annually, through 2024-2029.

Public Works

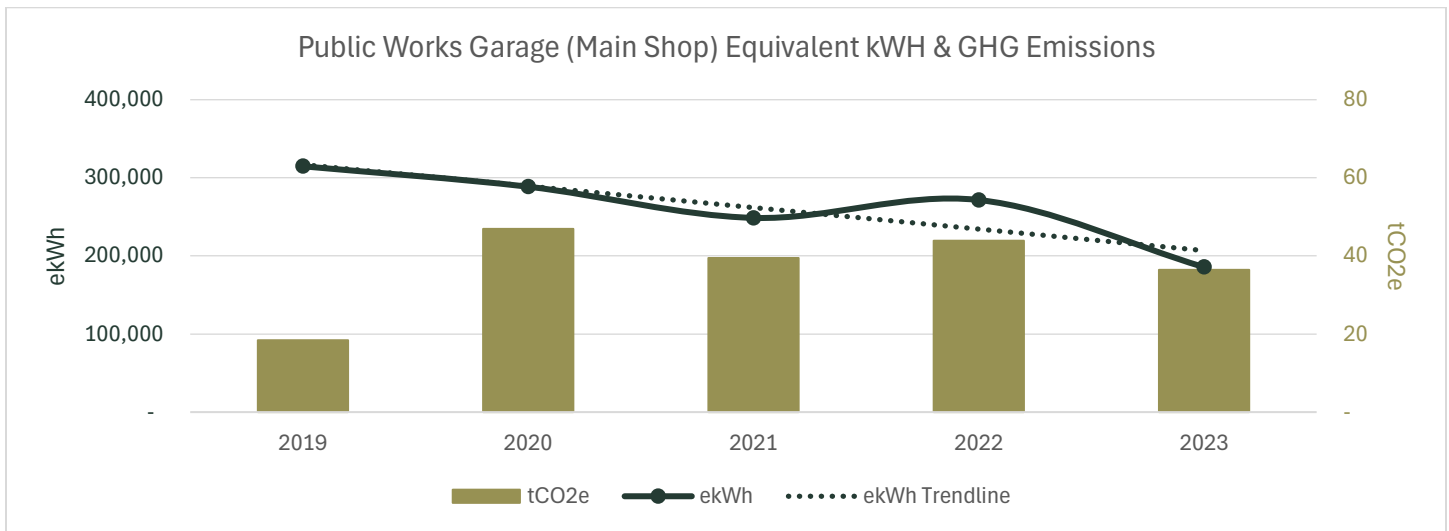
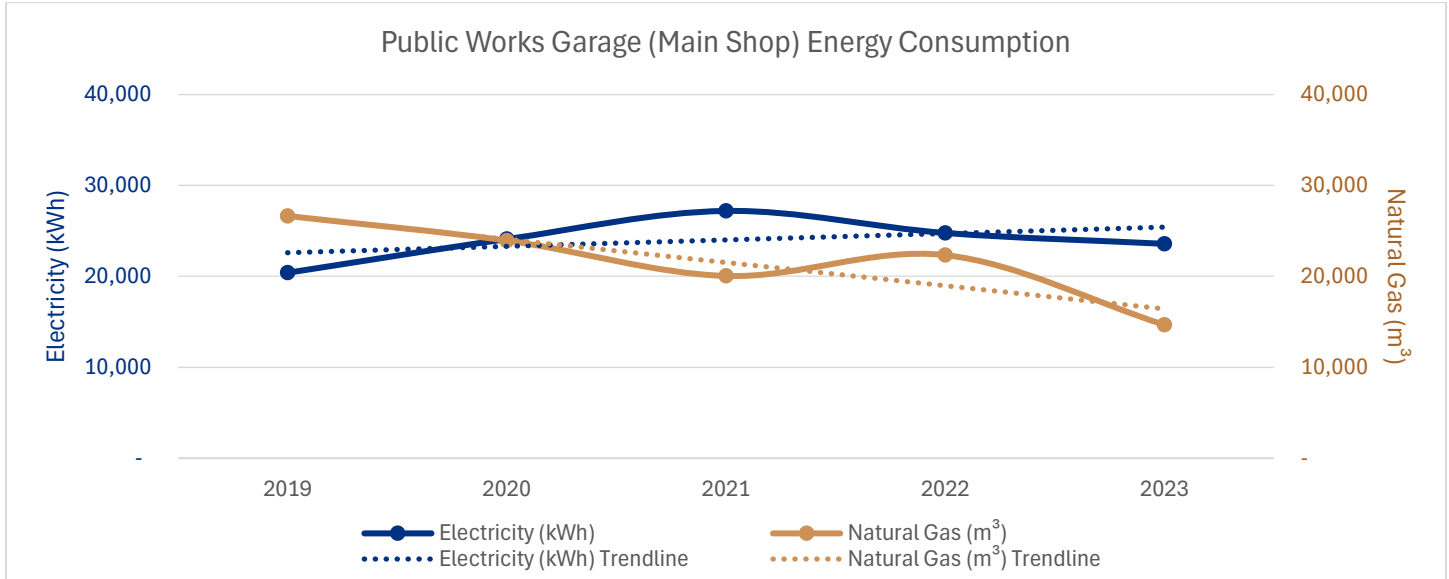
Building Maintenance Shop – 500 Broadway St, Haileybury



Over the past five years, the Building Maintenance Shop has seen a 20% reduction in energy consumption, from 152,223.47 ekWh in 2019 to 121,455.99 ekWh in 2023, and a slight 2% decrease in GHG emissions, from 22.1 to 21.7 tCO₂e. This facility is part of the 2024 Building Decarbonization Feasibility Study to achieve net zero emissions by 2050, aligning with the Corporate Greenhouse Gas Reduction Plan. This study, supported by funding from the Federation of Canadian Municipalities under the Green Municipal Fund, will inform future energy-saving retrofits and initiatives. LED lighting upgrades and additional conservation measures will be implemented as funding becomes available, through 2024-2029.

Public Works

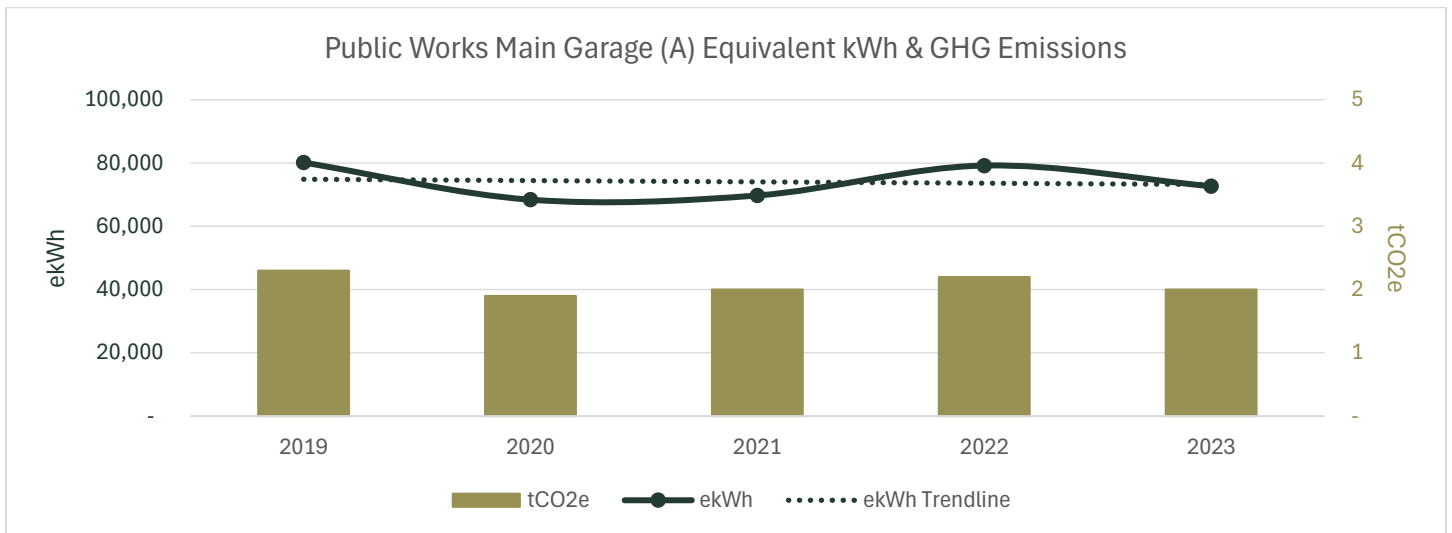
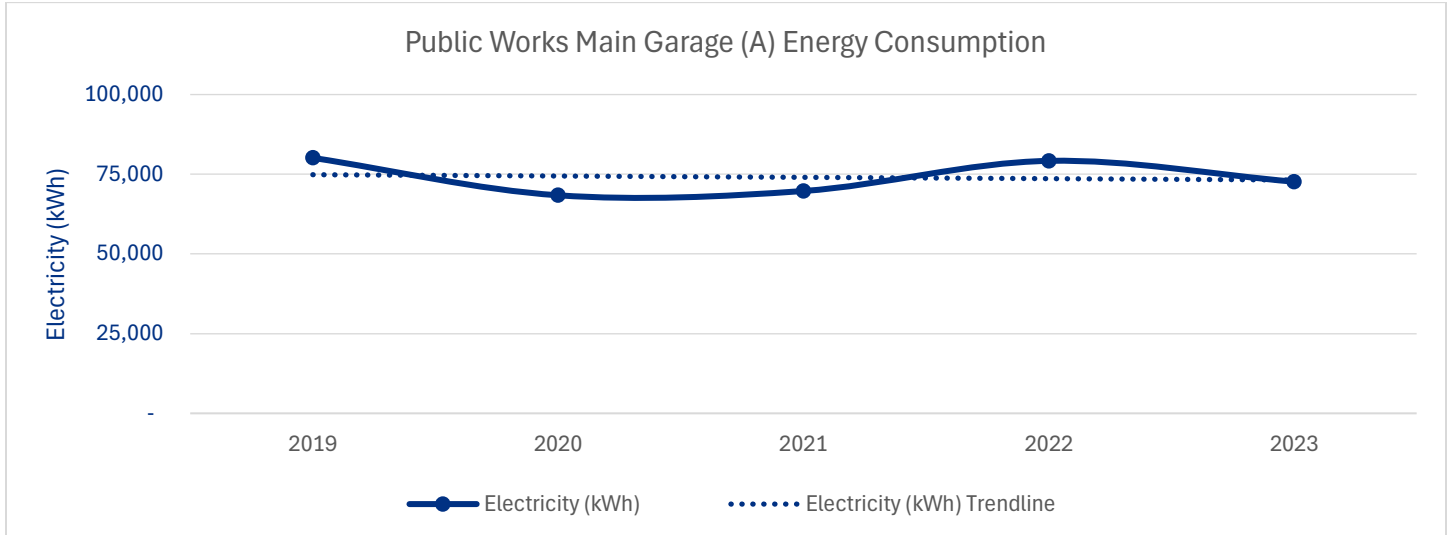
Public Works Garage - Main Shop – 501 Broadway St, Haileybury



The Public Works Garage - Main Shop experienced a 41% reduction in energy consumption, from 314,736.49 ekWh in 2019 to 185,662.2 ekWh in 2023, yet saw a 98% rise in GHG emissions, from 18.4 to 36.4 tCO₂e. This facility is part of the 2024 Building Decarbonization Feasibility Study, with the goal of net-zero emissions by 2050, in line with the Corporate Greenhouse Gas Reduction Plan. Supported by the Federation of Canadian Municipalities under the Green Municipal Fund, the study will inform necessary retrofits and energy improvement projects, with additional measures introduced as funding becomes available annually in the next five years.

Public Works

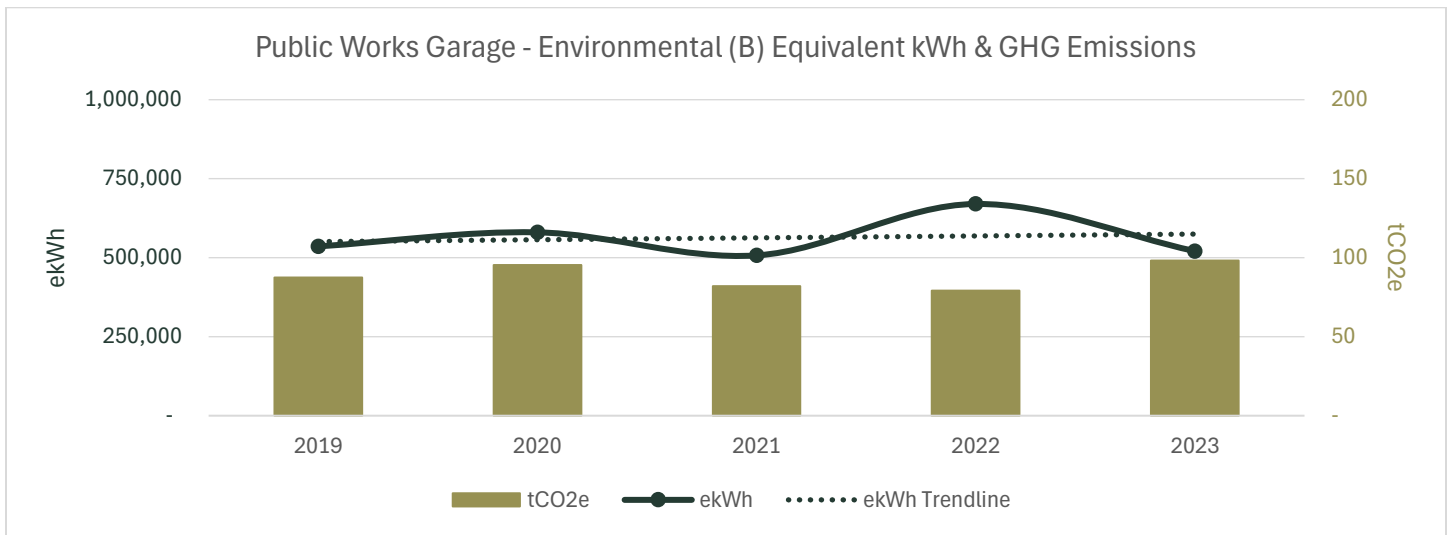
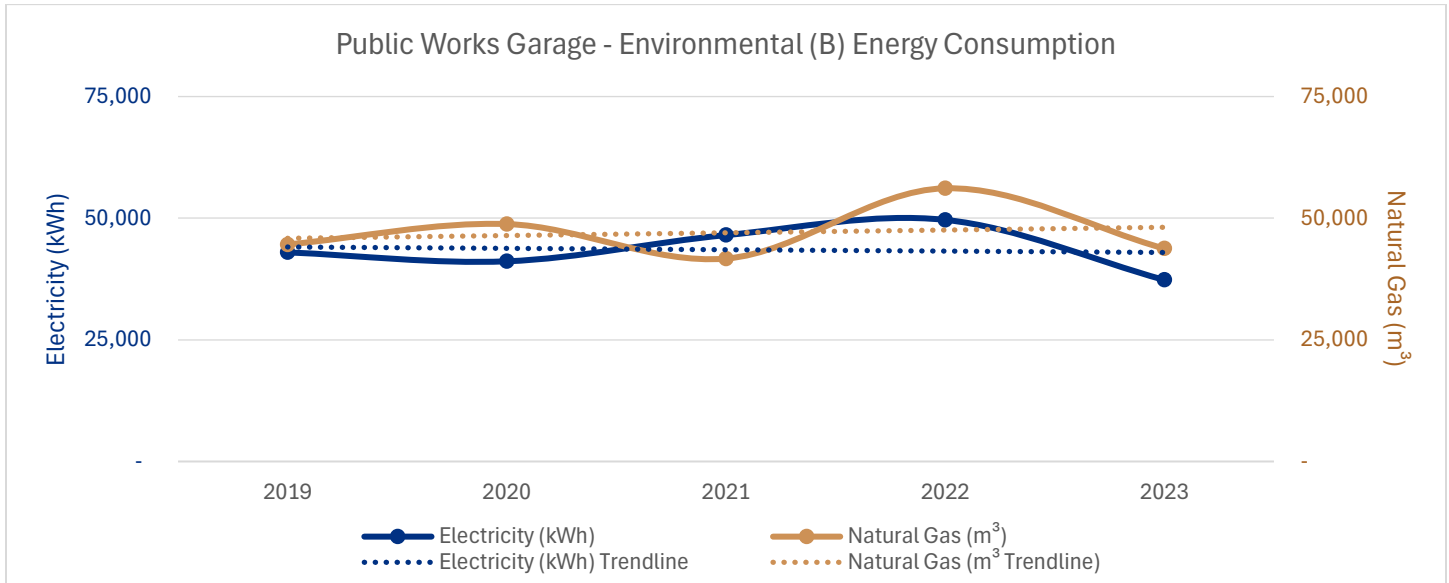
Public Works Main Garage (A) – 200 Lakeshore Rd N, New Liskeard



From 2019 to 2023, the Public Works Main Garage (A) saw a 13% reduction in both energy consumption, down from 80,134.35 ekWh in to 72,660.9 ekWh, and GHG emissions, from 2.3 to 2.0 tCO₂e. It's worth noting, the facility's gas consumption is documented under Public Works Garage - Environmental (B)'s meter, due to a shared metering system. As part of the effort to reach net-zero emissions by 2050, in line with the Corporate Greenhouse Gas Reduction Plan, the garage is part of the 2024 Building Decarbonization Feasibility Study. This initiative, backed by the Federation of Canadian Municipalities' Green Municipal Fund, will guide the implementation of future retrofits and energy-saving projects, with additional measures planned as funding allows over the 2024-2029 period.

Public Works

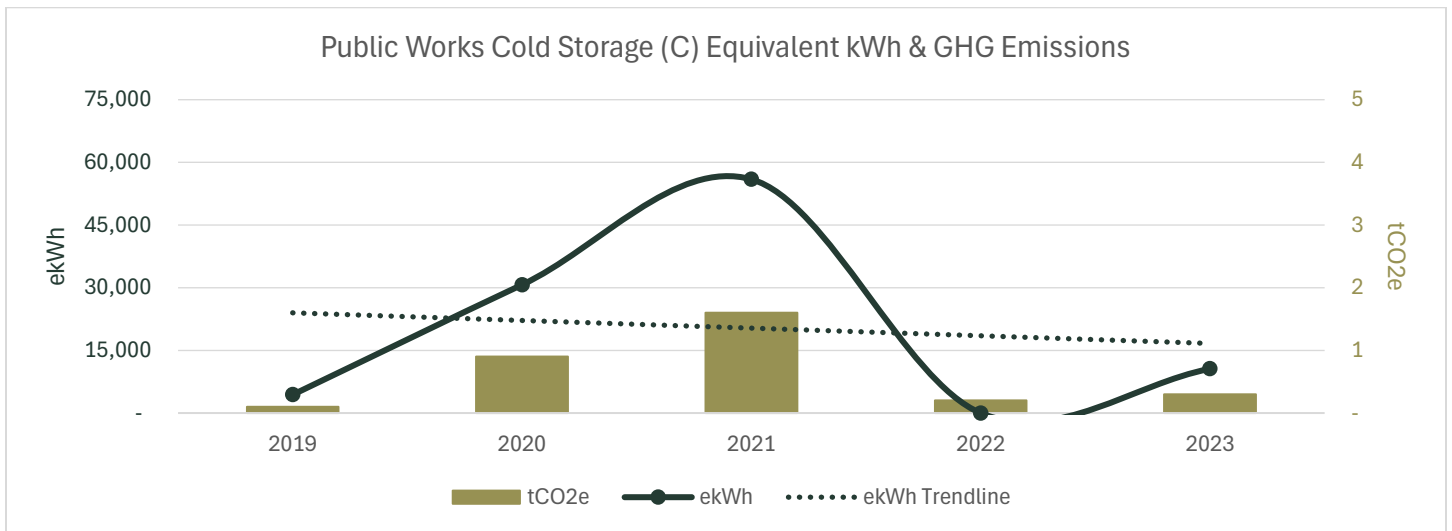
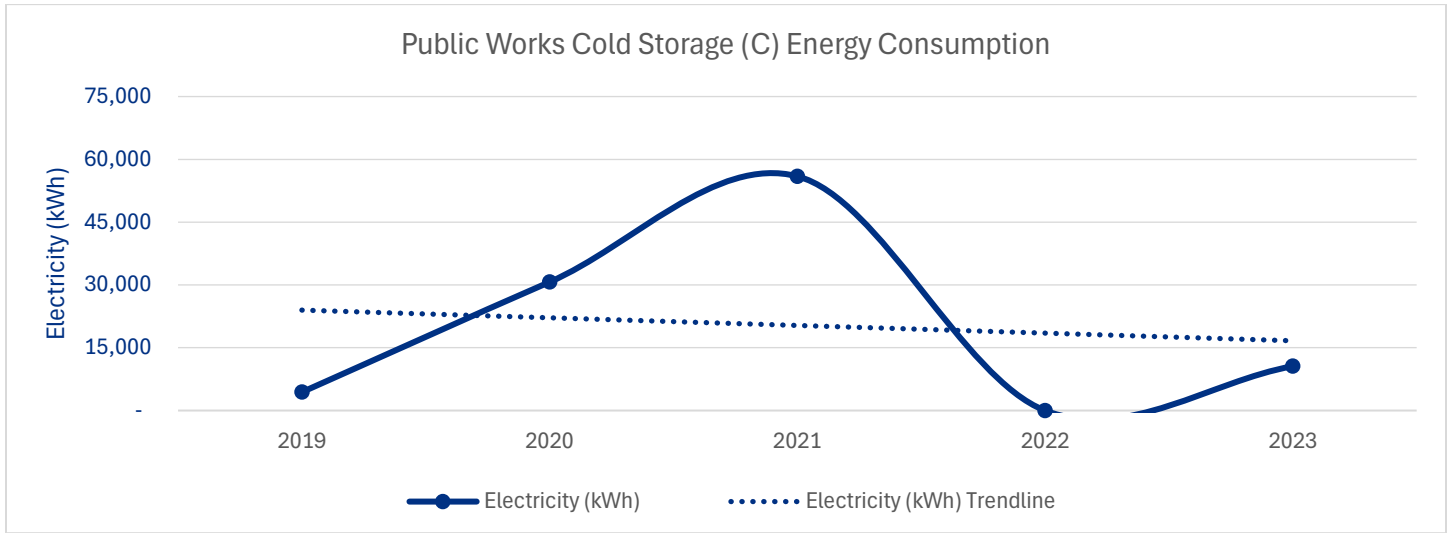
Public Works Garage - Environmental (B) – 200 Lakeshore Rd N, New Liskeard



The Public Works Garage - Environmental (B) saw a 3% decrease in energy consumption, from 535,797.59 ekWh in 2019 to 520,817.97 ekWh in 2023, but experienced a 12% increase in GHG emissions, from 87.4 to 98.2 tCO₂e. Notably, this facility shares its gas meter with the Public Works Main Garage (A), which results in the gas consumption of Garage (A) being logged under this facility's account. In alignment with the Corporate Greenhouse Gas Reduction Plan targeting net-zero emissions by 2050, the garage is part of the 2024 Building Decarbonization Feasibility Study. This study, supported by the Federation of Canadian Municipalities under the Green Municipal Fund, will shape future retrofits and energy projects. Additional energy-saving measures will be introduced as funding permits, over the next five years.

Public Works

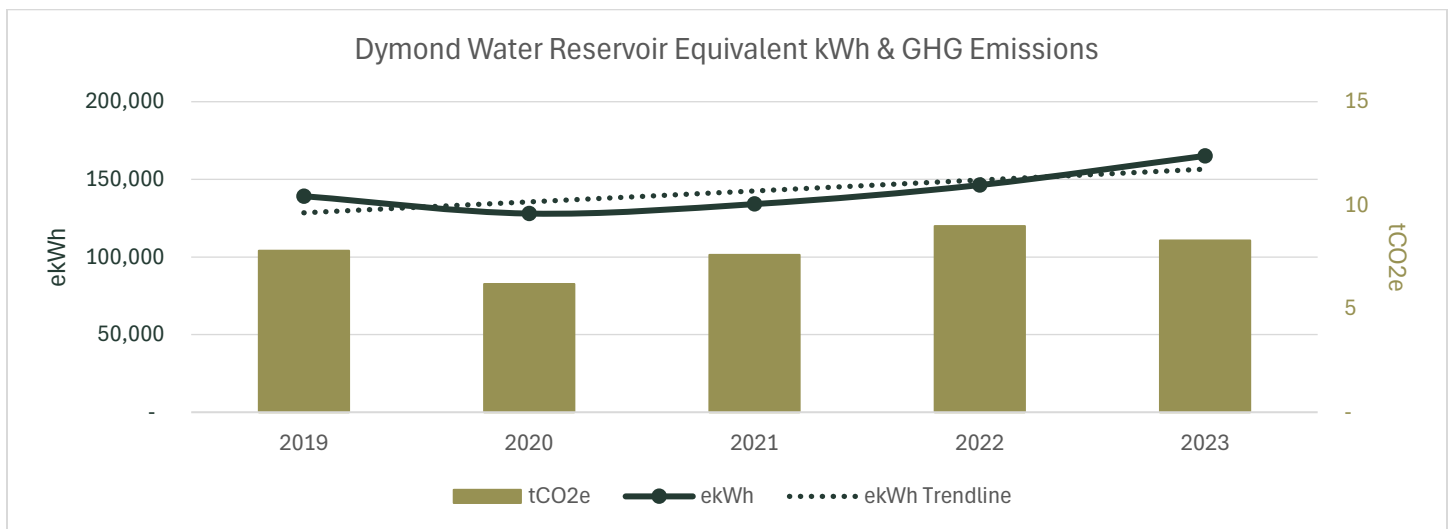
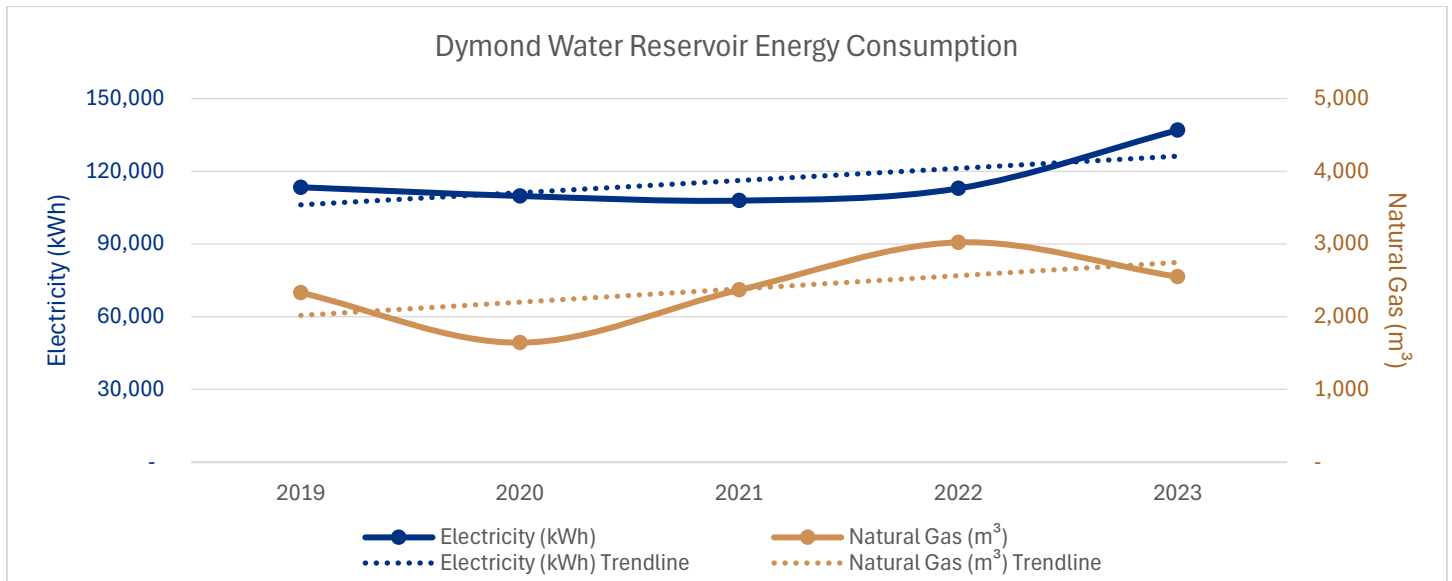
Public Works Cold Storage (C) – 200 Lakeshore Rd N, New Liskeard



Between 2019 and 2023, the Public Works Cold Storage (C) experienced a 141% rise in energy usage, from 4,395.87 ekWh to 10,588 ekWh, and a 200% increase in GHG emissions, from 0.1 to 0.3 tCO₂e. There was a significant decrease in 2019 with the construction of this new facility replacing the old Quonset building. Moving forward, energy-saving measures will continue to be implemented as funding becomes available annually, through 2024-2029.

Water and Wastewater

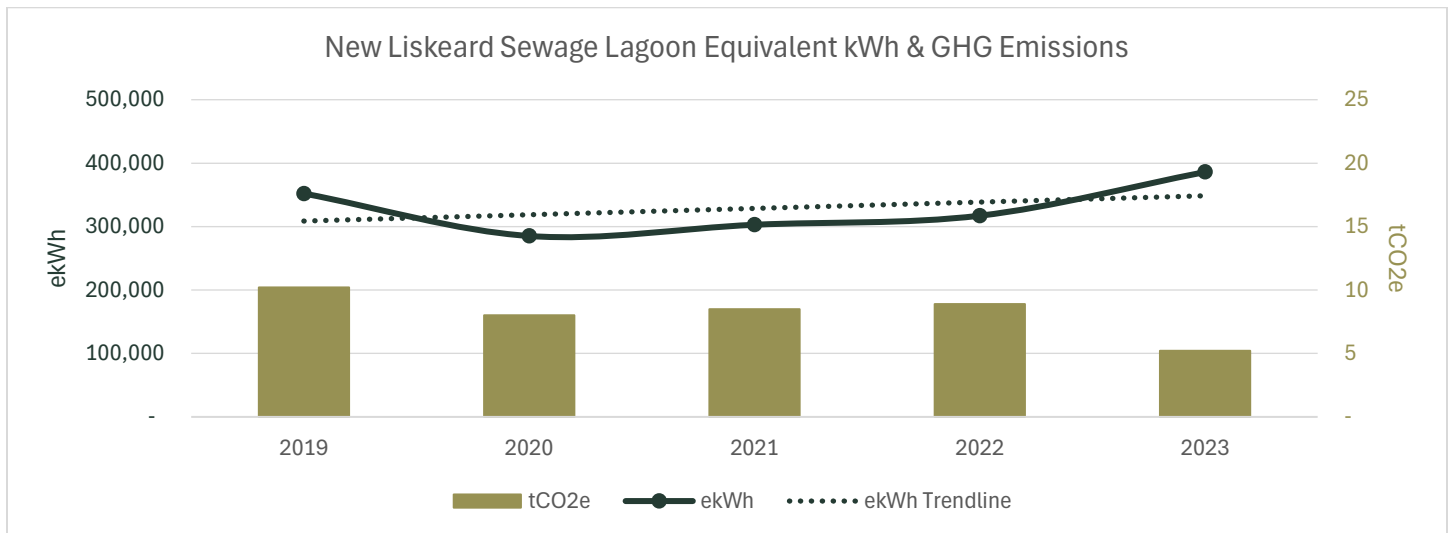
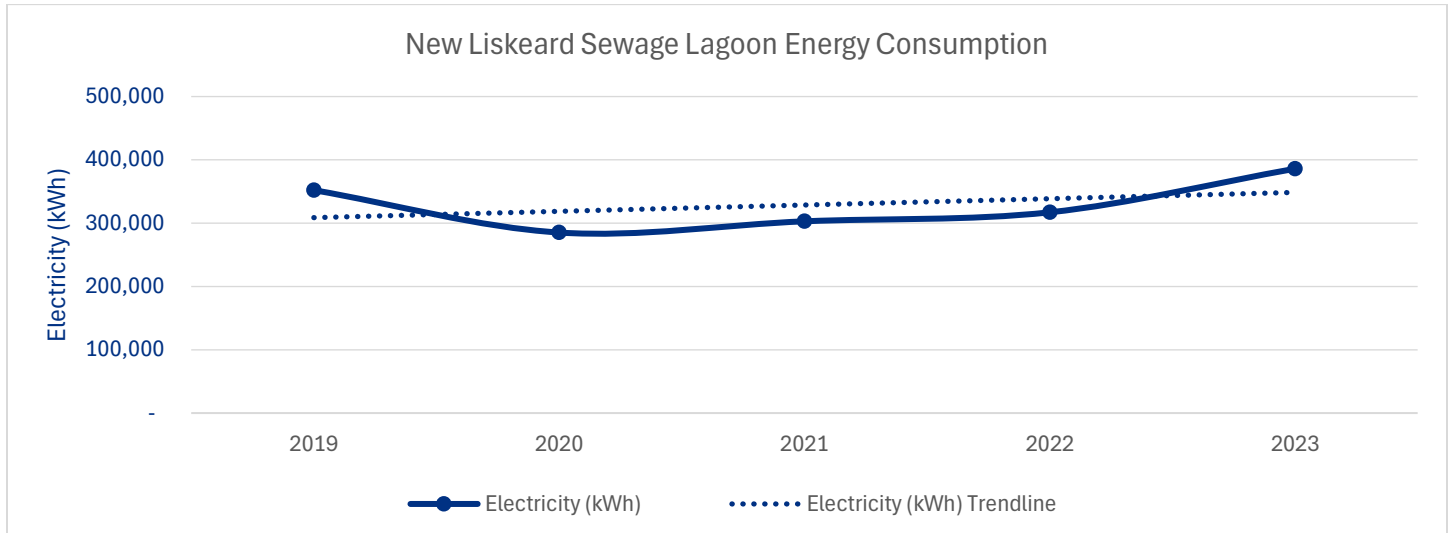
Dymond Water Reservoir – 286 Raymond St, New Liskeard



The Dymond Water Reservoir experienced a 19% increase in energy consumption, from 139,134.8 ekWh in 2019 to 165,097.99 ekWh in 2023, and a 6% rise in GHG emissions, from 7.8 to 8.3 tCO₂e, alongside a 52% jump in average influent annual flow rate, from 19.83 Mgal/d to 30.15 Mgal/d. The increase in energy use and emissions is directly tied to the higher water demand, reflected in the increased flow rate. Looking ahead to 2024-2029, energy conservation strategies will be implemented to manage this increased demand.

Water and Wastewater

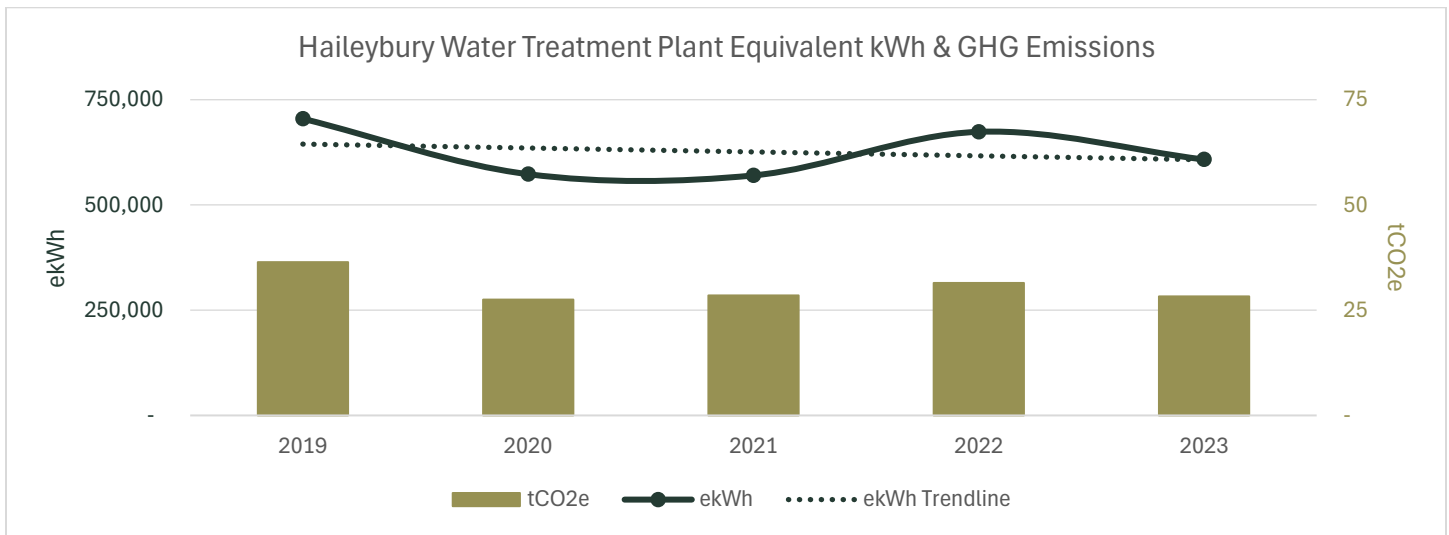
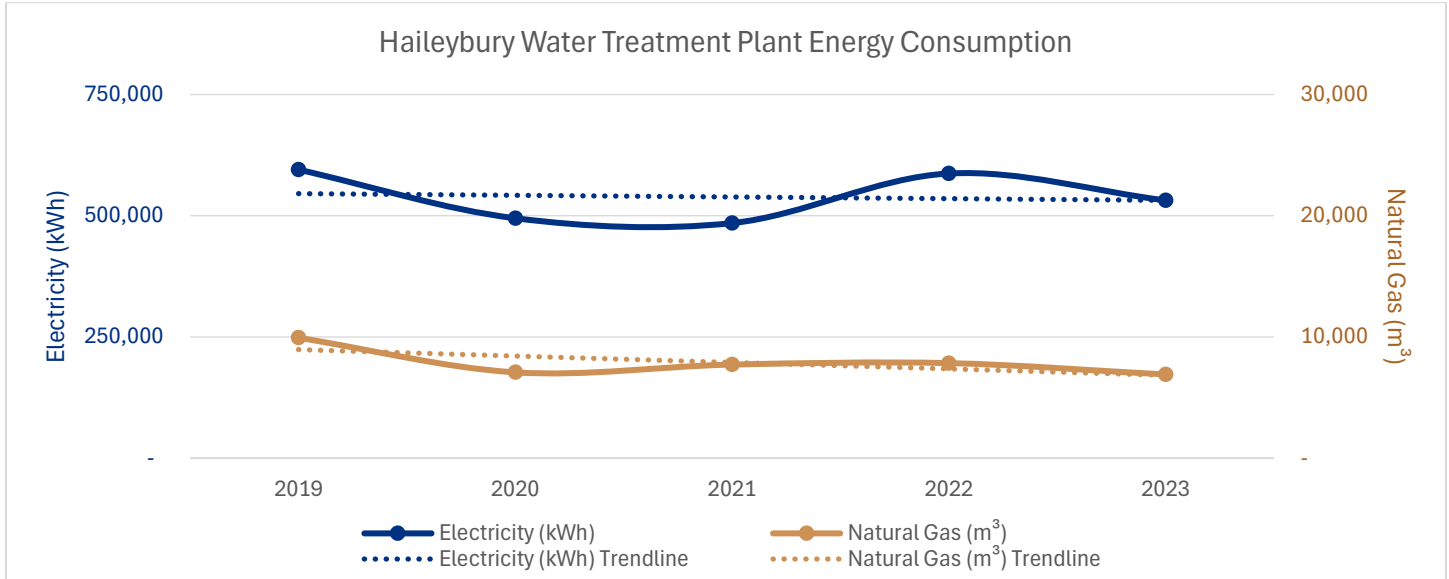
New Liskeard Sewage Lagoon – 177304 Bedard Rd, New Liskeard



From 2019 to 2023, the New Liskeard Sewage Lagoon saw a 10% increase in energy consumption, rising from 352,100 ekWh to 385,921.73 ekWh, along with a 49% decrease in GHG emissions, from 10.2 to 5.2 tCO₂e. This period also experienced a 24% increase in the average influent annual flow rate, from 449.12 Mgal/d to 558.25 Mgal/d. Efforts will continue to be made to enhance operations to balance increased demand through 2024-2029.

Water and Wastewater

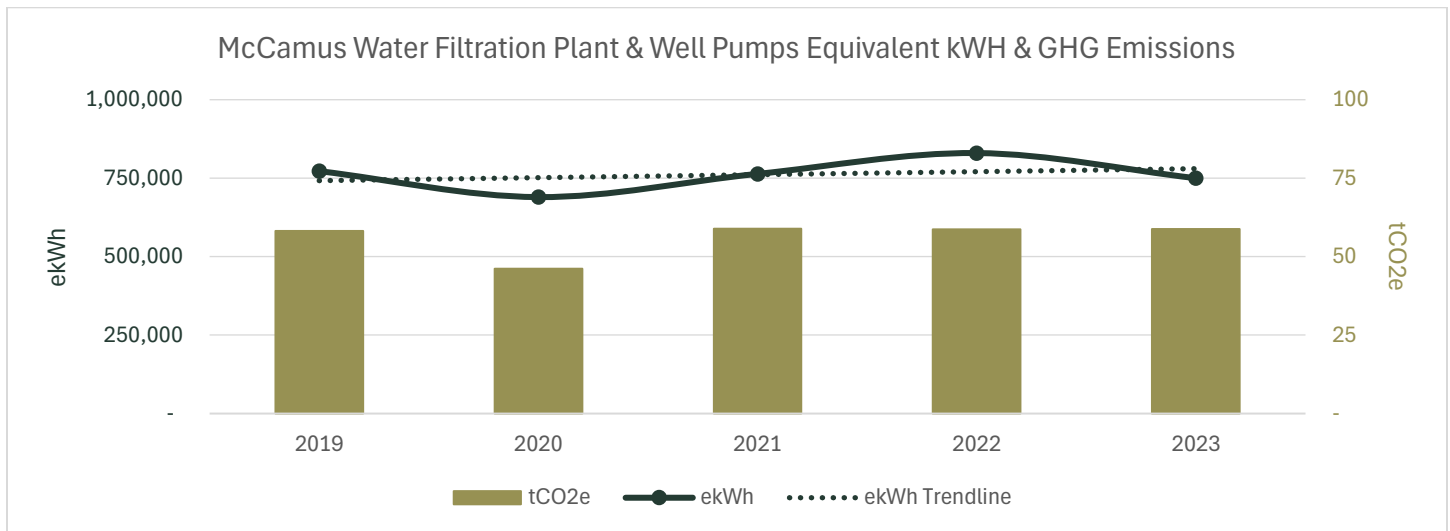
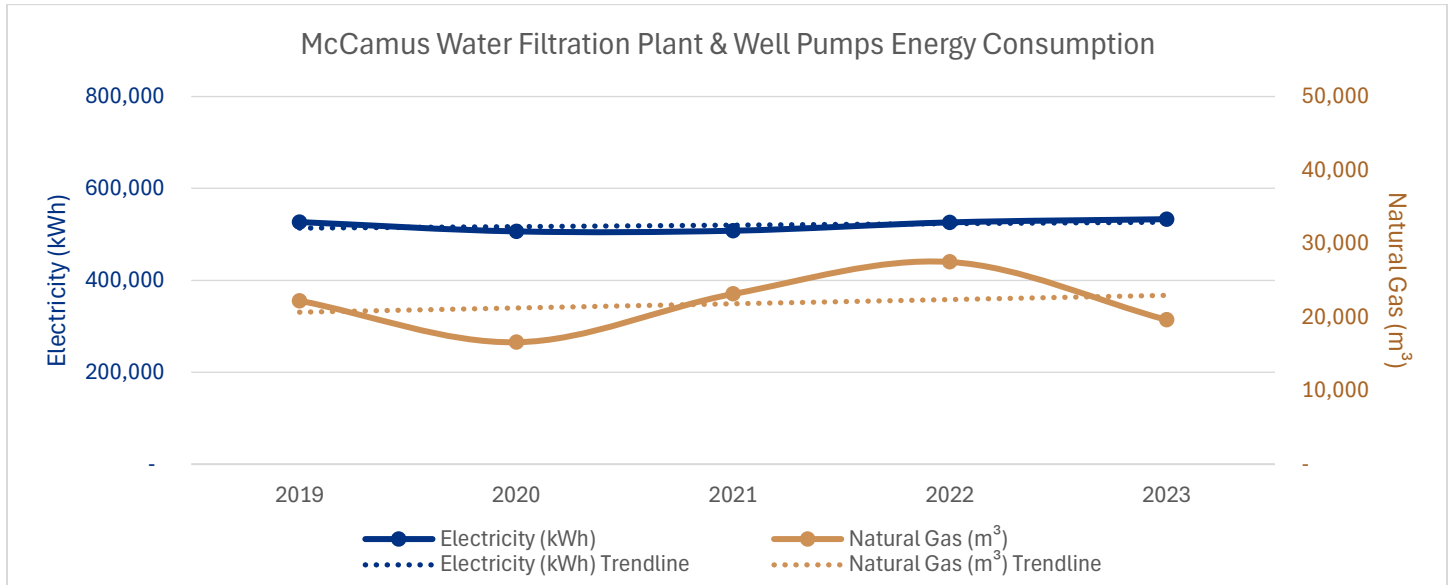
Haileybury Water Treatment Plant – 322 Browning St, Haileybury



Between 2019 and 2023, the Haileybury Water Treatment Plant saw a 14% reduction in energy usage, from 704,749.19 ekWh to 607,939.63 ekWh, and a 22% decrease in GHG emissions, from 36.4 to 28.3 tCO₂e, alongside a 14% drop in the average influent annual flow rate, from 253.36 Mgal/d to 218.98 Mgal/d. Filter rehabilitation has taken place, with the first two filters completed between 2022 and 2024, and the third filter is scheduled for completion in 2024, leading to improved operational efficiency and reduced energy consumption going forward. Future energy conservation efforts will continue over the next five years.

Water and Wastewater

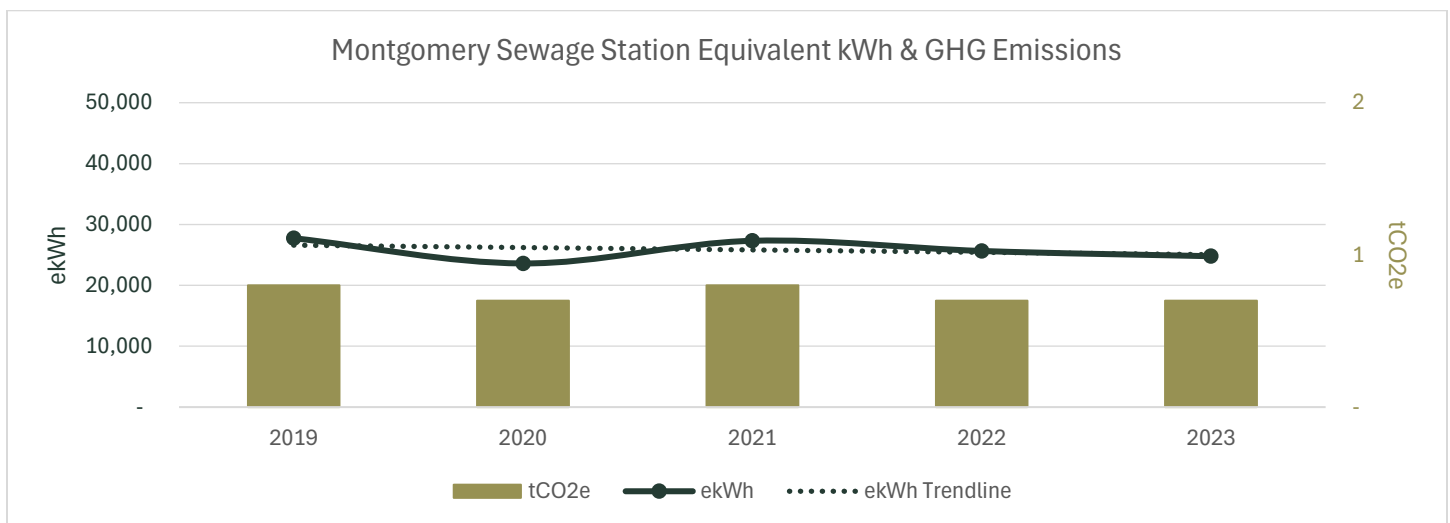
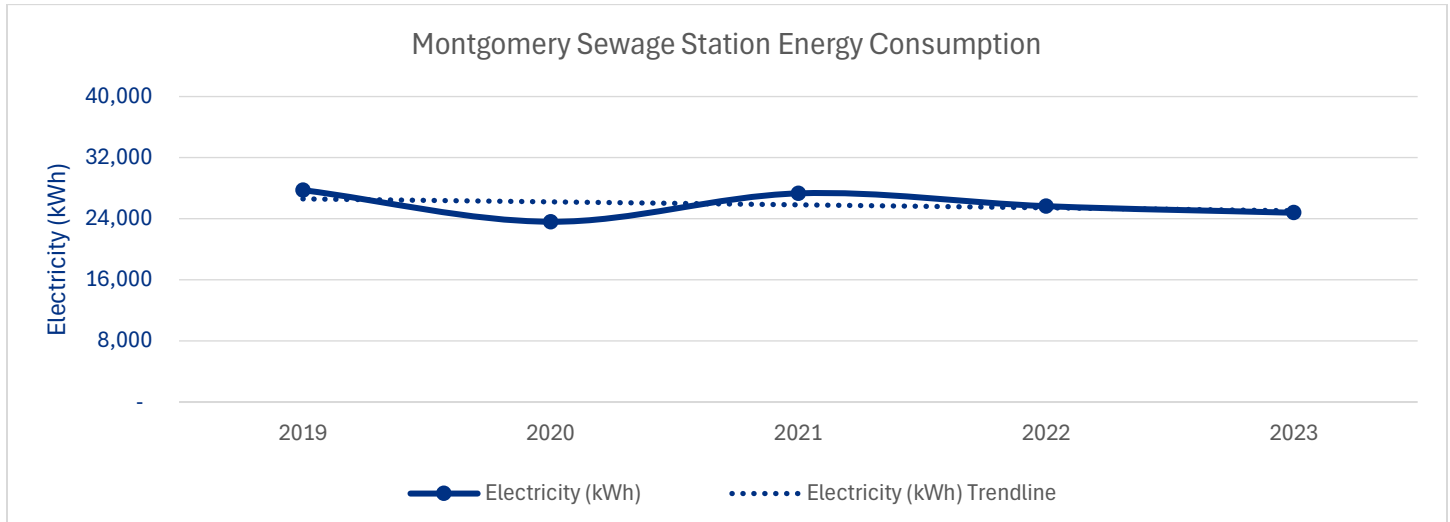
McCamus Water Filtration Plant & Well Pumps – 299-300 McCamus Ave, New Liskeard



The McCamus Water Filtration Plant & Well Pumps saw a 3% decrease in energy usage, from 772,360.27 ekWh in 2019 to 749,975.32 ekWh in 2023, but a slight 1% rise in GHG emissions, from 58.2 to 58.8 tCO₂e. This occurred alongside a 6% reduction in the average daily water processed, from 310.52 Mgal/d to 291.33 Mgal/d. Efforts will persist in optimizing energy consumption and minimizing emissions throughout 2024-2029.

Water and Wastewater

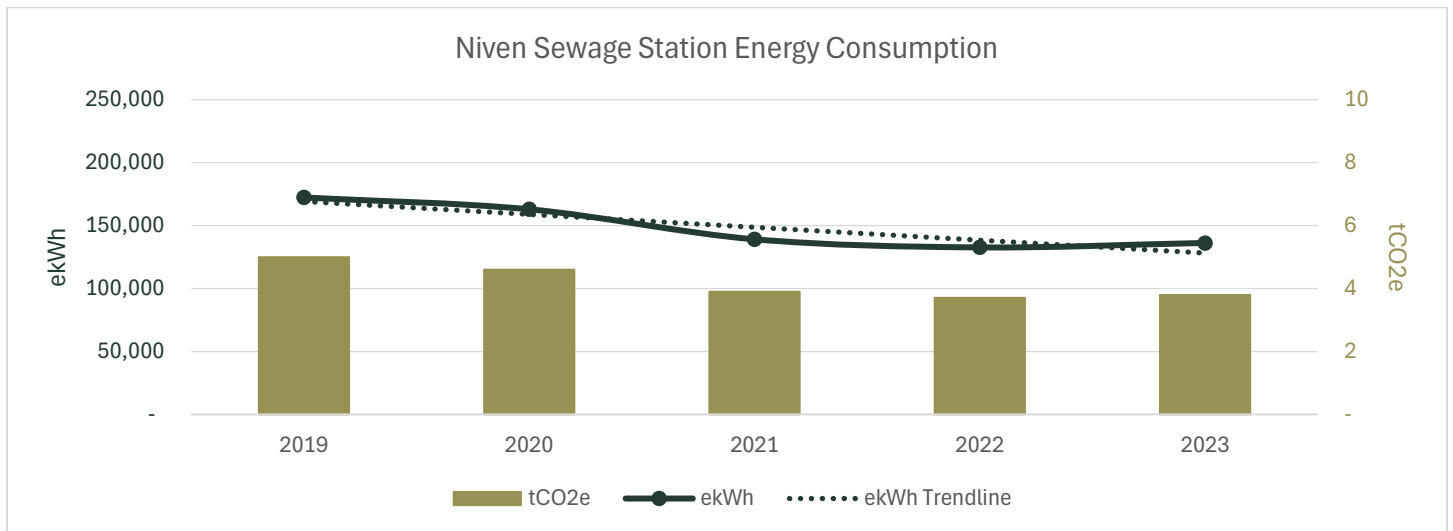
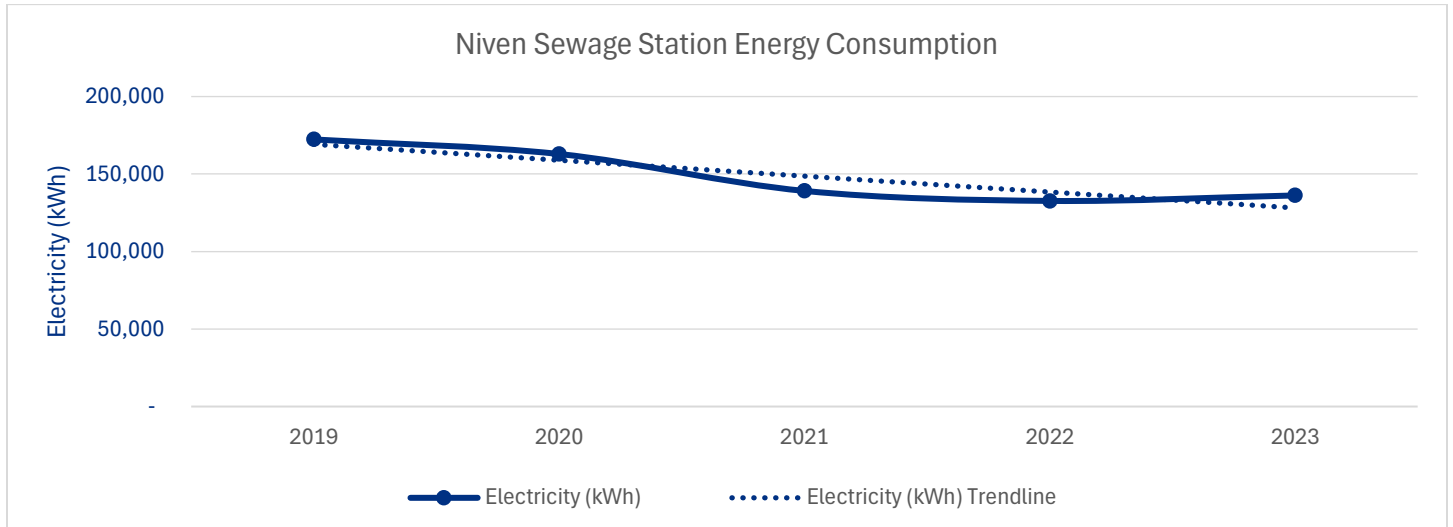
Montgomery Sewage Station – 125 Montgomery Ave, New Liskeard



From 2019 to 2023, the Montgomery Sewage Station saw an 11% reduction in energy consumption, from 27,745.86 kWh to 24,782.49 kWh, and a 13% decrease in GHG emissions, from 0.8 to 0.7 tCO₂e. This was accompanied by an 11% drop in the average daily flow rate, from 44.53 Mgal/d to 39.77 Mgal/d. Looking ahead to 2024-2029, efforts will continue in optimizing performance and reducing energy use.

Water and Wastewater

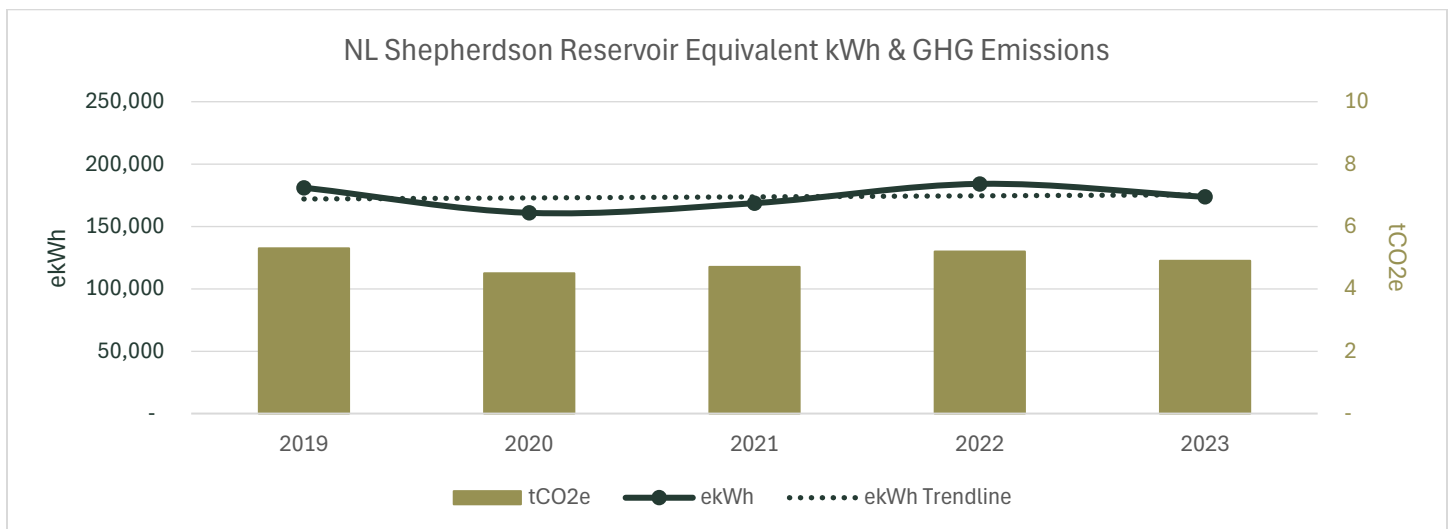
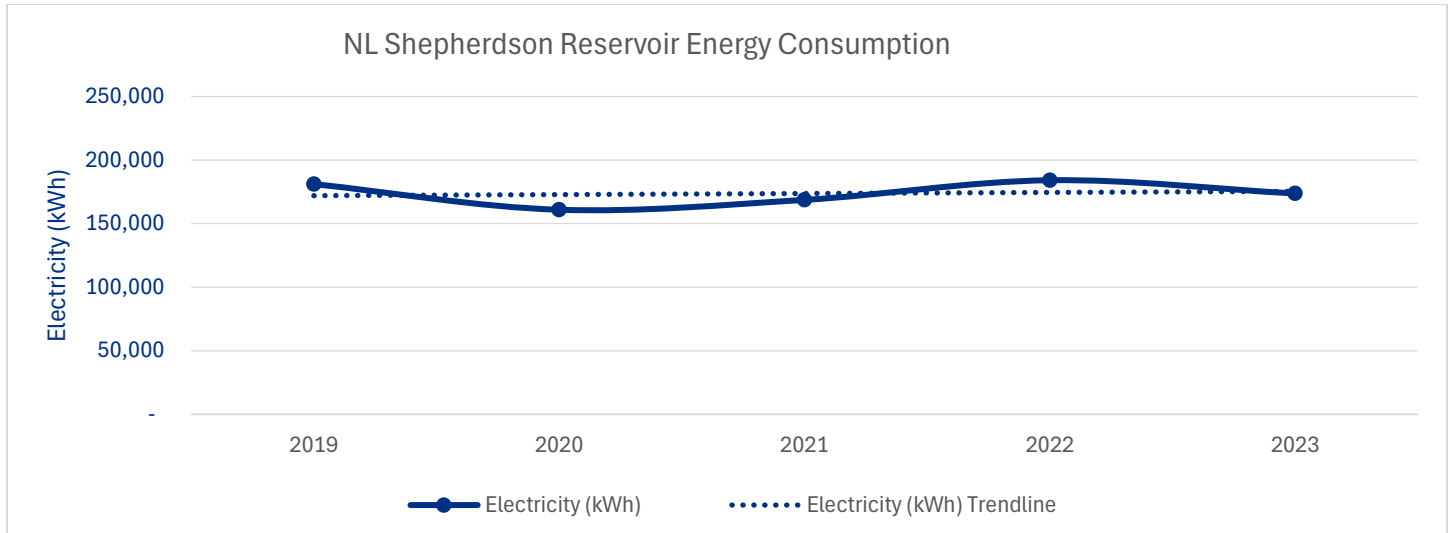
Niven Sewage Station – 184 Niven St N, New Liskeard



The Niven Sewage Station experienced a 21% reduction in energy usage, from 172,320 ekWh in 2019 to 136,180.58 ekWh in 2023, and a 24% decrease in GHG emissions, from 5 to 3.8 tCO₂e. This aligns with a 7% drop in the average daily flow rate, from 243.14 Mgal/d to 225.4 Mgal/d. Energy conservation efforts will continue, through 2024-2029.

Water and Wastewater

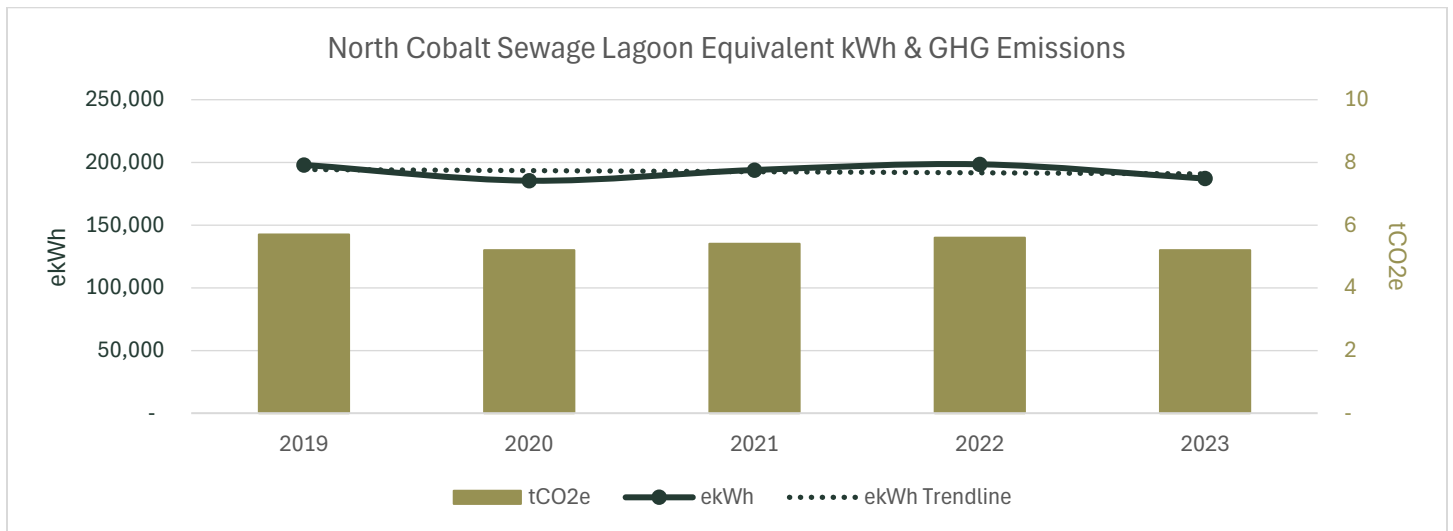
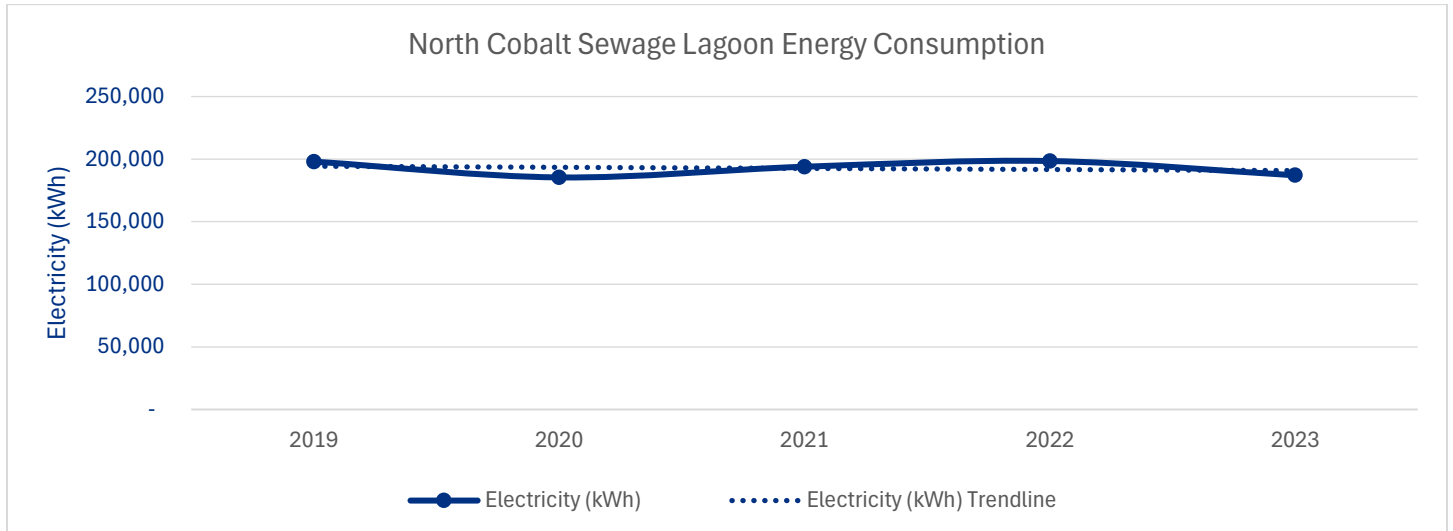
NL Shepherdson Reservoir – 176 Shepherdson Rd, New Liskeard



Between 2019 and 2023, the NL Shepherdson Reservoir saw a 4% reduction in energy consumption, from 181,080 ekWh to 173,700 ekWh, alongside an 8% decrease in GHG emissions, from 5.3 to 4.9 tCO₂e. This was accompanied by a 5% drop in the average daily water flow rate, from 36.74 Mgal/d to 34.99 Mgal/d. Looking ahead to 2024-2029, energy conservation efforts will continue.

Water and Wastewater

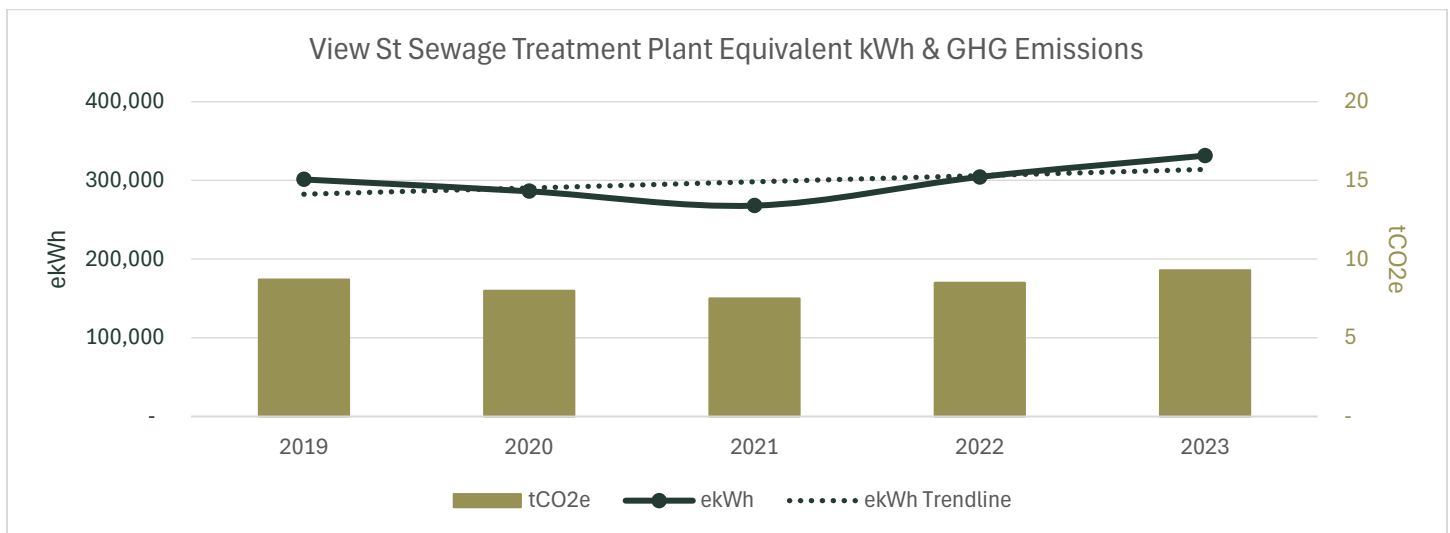
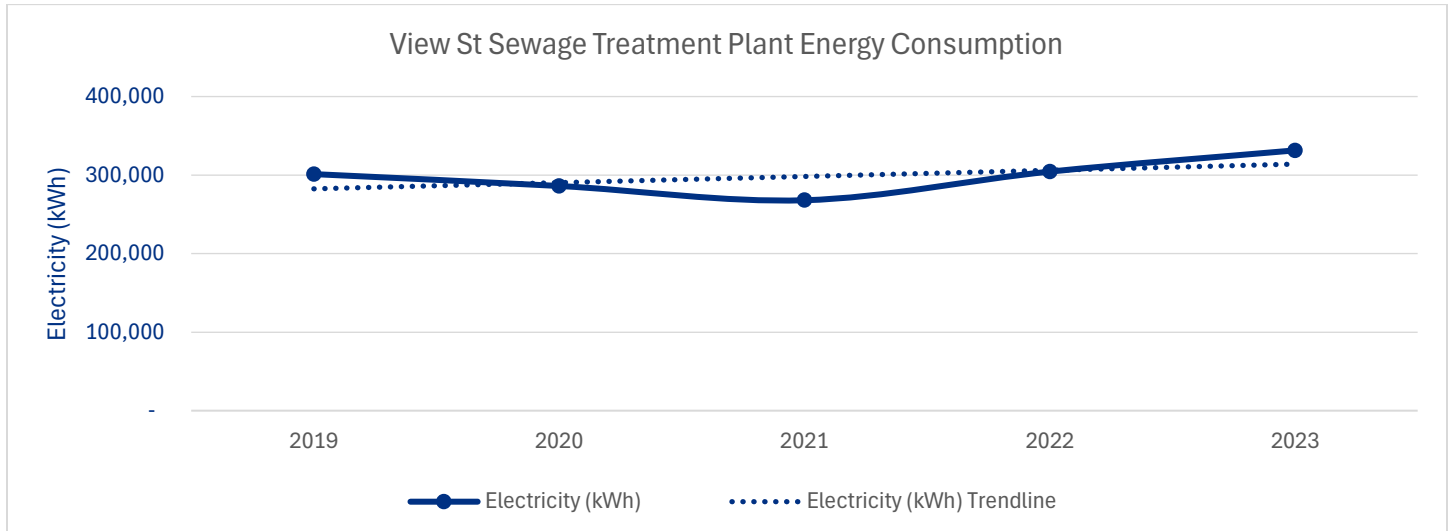
North Cobalt Sewage Lagoon – 543147 Proctors Rd, North Cobalt



The North Cobalt Sewage Lagoon experienced a 6% reduction in energy consumption, from 198,000 ekWh in 2019 to 187,080 ekWh in 2023, and a 9% decrease in GHG emissions, from 5.7 to 5.2 tCO₂e. This coincided with a 9% drop in the average daily water flow rate, from 54.51 Mgal/d to 49.71 Mgal/d. Efforts to enhance efficiency will persist through 2024-2029.

Water and Wastewater

View St Sewage Treatment Plant – 275 View St E, Haileybury



Between 2019 and 2023, the View St Sewage Treatment Plant saw a 10% rise in energy consumption, from 301,200 ekWh to 331,434.44 ekWh, and a 7% increase in GHG emissions, from 8.7 to 9.3 tCO₂e. This occurred despite a 6% decrease in the average influent flow rate, from 212.01 Mgal/d to 198.94 Mgal/d. Moving forward into 2024-2029, the focus will be on implementing strategies for greater efficiency.