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Conservation and Demand Management Plan, Township of Muskoka Lakes

2024-2029 PLAN

Township of Muskoka Lakes

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	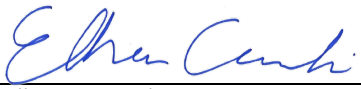
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Issue	Date	Description
1	November 8, 2024	Final Report

Document Contents

Tables

Figures

Appendices

1 Glossary of Terms and Acronyms

TERM	DEFINITION
Carbon Cost	A national minimum price on carbon emissions in Canada, to reduce greenhouse gas emissions and encourage innovation [1].
Conservation and Demand Management Plan	Under Ontario Regulation 25/23, a Conservation and Demand Management (CDM) Plan is a strategic document public agencies, including municipalities, must prepare every five years. This plan outlines the energy conservation measures and demand management strategies implemented over the past and those planned for the upcoming five years. The goal is to reduce energy consumption and greenhouse gas emissions [2].
Joint Muskoka Growth Strategy (2024)	The Joint Muskoka Growth Strategy (2024) is an updated strategic plan developed by the District of Muskoka. It aims to guide long-term population, housing, and employment growth from 2021 to 2051. This strategy will inform the District's Official Plan and other land use planning functions, ensuring sustainable development and infrastructure planning [3].
Net-zero GHG	Net-zero GHG (greenhouse gases) refers to the balance between the amount of greenhouse gases emitted into the atmosphere and the amount removed from it. Achieving net-zero GHG means any emissions produced are offset by actions removing an equivalent amount of greenhouse gases (in tonnes of CO_2 equivalent), resulting in no net increase in atmospheric greenhouse gas levels.
Net-zero Energy Ready Building	Net-zero energy ready refers to buildings designed and constructed to be highly energy-efficient, so they can achieve net-zero energy performance with the addition of renewable energy systems like solar photovoltaic panels. Essentially, these buildings are prepared to produce as much energy as they consume once the renewable systems are installed.
Ontario Regulation 25/23	Ontario Regulation 25/23 mandates broader public sector organizations, such as municipalities, public hospitals, and school boards, must prepare and publish energy conservation and demand management plans and update their plans every five years. These plans detail energy consumption and conservation measures, aiming to enhance energy efficiency and reduce greenhouse gas emissions [2] [4].
Save on Energy	An incentive program in Ontario, Canada, offering incentives and resources to help residents and businesses reduce energy consumption and improve energy efficiency, administered by the Independent Electricity System Operator.
Scope 1 GHG emissions	Scope 1 GHG emissions are direct greenhouse gas emissions from sources an organization owns or controls. These include emissions from on-site facilities, such as manufacturing plants, office buildings, and fleet vehicles.

Scope 2 GHG emissions	Scope 2 GHG emissions are indirect greenhouse gas emissions resulting from the generation of purchased electricity, steam, heat, or cooling an organization uses. These emissions occur at the facility where the energy is produced, but they are accounted for in the company's greenhouse gas inventory because they are a consequence of the company's energy consumption. GHG emissions related to electricity, district hearing and cooling are examples of scope 2 GHG emissions.
Scope 3 GHG emissions	Scope 3 GHG emissions are all indirect greenhouse gas emissions occuring in an organization's value chain, excluding those covered in Scope 2. These include both upstream and downstream activities, such as the extraction and production of purchased goods and services, transportation, waste disposal, and the use of sold products.

ACRONYM	FULL PHRASE
ASHP	Air Source Heat Pump
BAU	Business As Usual
BPS	Broader Public Sector
CDM	Conservation and Demand Management (Plan)
DSM	Demand Side Management
ECM	Energy Conservation Measure
ekBTU/ft2	Energy per unit area – kilo-British Thermal Units per square feet
EUI	Energy Use Intensity
FCM	Federation of Canadian Municipalities
GHG	Greenhouse Gas
GWP	Global Warming Potential
HVAC	Heating Ventilation and Air Conditioning
km	Kilometre
L	Litre
LED	Light Emitting Diode
Township	Township of Muskoka Lakes
PV	Photovoltaic

ROI	Return on Investment
RTU	Roof Top Unit
Tonnes CO2e	Tonnes of Carbon Dioxide Equivalent

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Subject: Letter of Acknowledgment of the Conservation and Demand Management Plan (2024-2029)

The Township of Muskoka Lakes' senior management formally endorses the **Conservation and Demand Management Plan (2024-2029)**, which was reviewed and approved during the Township Council meeting held on **November 13, 2024**.

The preparation of this plan was a collaborative effort that engaged Township staff to provide institutional knowledge and subject matter expertise. We extend our sincere appreciation to the following contributors for their invaluable support:

- **Corey Moore**, Manager of Parks, Facilities, and Recreation
- **David Pink**, Chief Administrative Officer
- **Nick Colucci**, Director of Operational Services
- **Tim Sopkowe**, Manager of Public Works

A special acknowledgment is extended to **Corey Moore**, who served as the primary point of contact and played a vital role in coordinating the development of this comprehensive plan.

This Conservation and Demand Management Plan demonstrates the Township's continued commitment to energy conservation, sustainability, and responsible resource management. It will serve as an essential guide for achieving environmental objectives and fostering operational efficiency over the next five years.

The Township of Muskoka Lakes appreciates the effort and expertise provided by Tatham Engineering in developing this plan, which aligns with our shared vision of a sustainable future.

Sincerely,
David Pink
Chief Administrative Officer
Township of Muskoka Lakes

3 Introduction

Under Ontario Regulation 25/23: *Broader Public Sector: Energy Reporting and Conservation and Demand Management Plans*, the Township of Muskoka Lakes (Township) is required to develop and publish an Energy Conservation and Demand Management (CDM) plan and update it every five years.

The Township demonstrates its commitment to sustainable practices and efficient energy management through the development of CDM plan. Covering the period from 2024 to 2029 this plan builds upon past achievements and aligns with emissions reduction strategies. Community members can access hard copies of the plan at the Township Town Hall located at 1 Bailey Street, Port Carling, Ontario P0B 1J0 or download a PDF copy from the Township website.

3.1 REGULATORY FRAMEWORK

Ontario Regulation 25/23, established under the Electricity Act, 1998, sets forth the requirements for energy conservation and demand management (CDM) plans for broader public sector (BPS) organizations. This regulation mandates all BPS facilities, which include municipalities, universities, colleges, hospitals, and school boards, develop and implement comprehensive CDM plans. The regulation's primary objectives are to promote energy efficiency, reduce greenhouse gas (GHG) emissions, and ensure sustainable energy use across the public sectors. Key requirements of the regulation include:

- **Annual Reporting:** BPS organizations must submit their annual energy consumption and GHG emissions reports.
- **CDM Plan Development and Updates:** BPS organizations are required to develop and update the CDM plan every five years.
- **Public Disclosure:** BPS organizations must make the plan publicly accessible, such as posting on their organizational website.
- **Senior Management Approva**l: BPS organizations' senior management must approve the CDM plan.

3.2 TOWNSHIP OF MUSKOKA LAKES BACKGROUND

The Township, situated in Ontario, Canada, is known for its stunning natural landscapes and rich cultural heritage. The Township encompasses numerous lakes and waterways, making it a popular destination for boating, fishing, and outdoor recreation. With a commitment to preserving its natural beauty and fostering a vibrant community, Muskoka Lakes offers a blend

of historical charm and modern amenities. The area is also notable for its strong community spirit, reflected in various local events, recreational programs, and environmental initiatives.

On August 11, 2021, the Muskoka District Council declared a Climate Emergency and committed to the development of Regional Climate Change Adaptation Plan (ReCAP) [5]. The district focused on the vision which Muskoka will be a progressive and resilient leader in the urgent need to adapt to changing climate conditions, ensuring the protection of the natural environment and prosperous communities. Additionally, the Township is working collaboratively with other 5 lower tier area municipalities in the District of Muskoka to develop the Regional Climate Change Mitigation Plan (ReCCMP). This plan will include detailed action items and targets to reduce GHG emissions and energy consumption and provides a clear path for the Township to reach net-zero GHG.

The District of Muskoka Growth Strategy, detailed in the Phase 1 – Growth Projections and Area Municipal Allocations report prepared by Watson & Associates on February 1, 2024 [3], plays a critical role in shaping the Township's approach to sustainable development. By projecting growth and allocating municipal resources accordingly, the strategy ensures expansion is managed to minimize environmental impact. This includes considerations for green spaces, efficient land use, and the integration of renewable energy sources in new developments.

As a lower-tier municipality within the District of Muskoka, the Township has actively participated in the Growth Strategy, ReCAP, and ReCCMP. This involvement will support the Township in enhancing its resilience against the significant and high-risk impacts of climate change and its commitment to reduce energy use ang GHG emissions.

While the Regional Climate Change Mitigation Plan (ReCCMP) is anticipated to set clear targets for GHG reduction for short and long term and provides list of projects and measurable action items to decarbonize the corporate assets in a long term with a goal to achieve net-zero GHG targets, the purpose of the CDM plan is proposed to discuss near term (five years) energy efficiency, demand management strategies, water conservation and GHG reduction, and corporate management and behavioural measures to foster the culture of sustainability across all Township operations. The strategies listed in this plan as well as the resources provided can provide a guidance to municipal team members to adopt a sustainable approach at all their day-to-day operations. To promote Council and community understanding, the following table outlines and clarifies the key differences among the Township's various climate-related plans:

PLAN TYPE	OBJECTIVE	FREQUENCY OF UPDATE	REGULATORY REQUIREMENTS	PRIMARY FOCUS
Conservation and Demand Management Plan	Promote energy efficiency and sustainable energy management strategies as well as behavioural measures across BPS facilities to foster sustainability culture across the organization	Near term targets and approach, update every five years	Ontario Regulation 25/23	Energy conservation, water conservation, management and behavioural and GHG emission reduction
District of Muskoka Regional Climate Change Mitigation Plan (ReCCMP)	Long term decarbonization of the assets to achieve net-zero GHG by developing baseline GHG inventory, set reduction targets, and identify decarbonization strategies for corporate emissions	As needed, with ongoing tracking	No regulatory requirement, Township initiated	Baseline GHG inventory, regional mitigation planning to achieve the long-term goal of net-zero GHG

4 Past Performance (2018-2023)

4.1 2018-2023 ENERGY USE AND GHG EMISSIONS

The Township established its energy baseline to develop an effective and efficient energy conservation and demand management plan. This involved reviewing and comparing the highest and lowest performing facilities to identify best practices that could be transferred, potential energy conservation measures (ECM), and areas for further reducing energy consumption and greenhouse gas (GHG) emissions. This strategic approach ensures continuous improvement in energy efficiency and sustainability across the Township's operations.

The Township manages thirty (30) buildings with a total floor area of 191,548 square feet. The buildings are using electricity, propane and fuel oil as a source of energy. In 2018, Township consumed a total 277,437 kWh for its streetlight assets. Total energy use and costs for 2018 are summarized below. This plan uses 2018 energy consumption data as a baseline to track energy consumption patterns, to reflect current and future energy conservation measures. Table 1 lists energy use and GHG emissions data for the buildings for years 2018-2023. Table 2 display 2018 baseline energy consumption data for streetlights. A detailed list of energy use for buildings and their respective GHG emissions are provided in Appendix A.

Table 1: Township of Muskoka Lakes Building 2018-2023 Energy Consumption and GHG Emissions

YEAR	ELECTRICITY (kWh)	ELECTRICITY GHG EMISSIONS (tCO2e)	PROPANE (L)	PROPANE GHG EMISSIONS (tCO2e)	FUEL OIL (L)	FUEL OIL GHG EMISSIONS (tCO2e)	TOTAL GHG EMISSIONS (tCO2e)
2018	1,577,973	47	126,308	195	59,533	164	406
2019	1,039,703	31	147,575	228	52,207	144	403
2020	1,405,470	42	180,554	279	40,070	111	432
2021	1,312,546	39	139,950	216	31,648	87	342
2022	1,527,291	45	200,514	310	110,251	305	660
2023	1,578,574	47	189,427	293	99,472	275	614

Table 2: Township of Muskoka Lakes Street & Traffic Light 2018 Baseline Energy Consumption

ENERGY	QUANTITY	UNIT
Electricity	277,437	kWh

Based on the Township's 2018 energy consumption data, GHG emissions in tonnes carbon dioxide equivalent (tCO2e) have been calculated and displayed in Table 3 below.

Table 3: Township of Muskoka Lake 2018 Baseline GHG emission (tCO2e)

ASSET TYPE	TOTAL GHG EMISSION (tCO2e)
Building	406
Streetlight	8

Figure 1 below depicts the distribution of greenhouse gas (GHG) emissions by sector within the Township. The emissions are categorized into two asset types: building and streetlight.

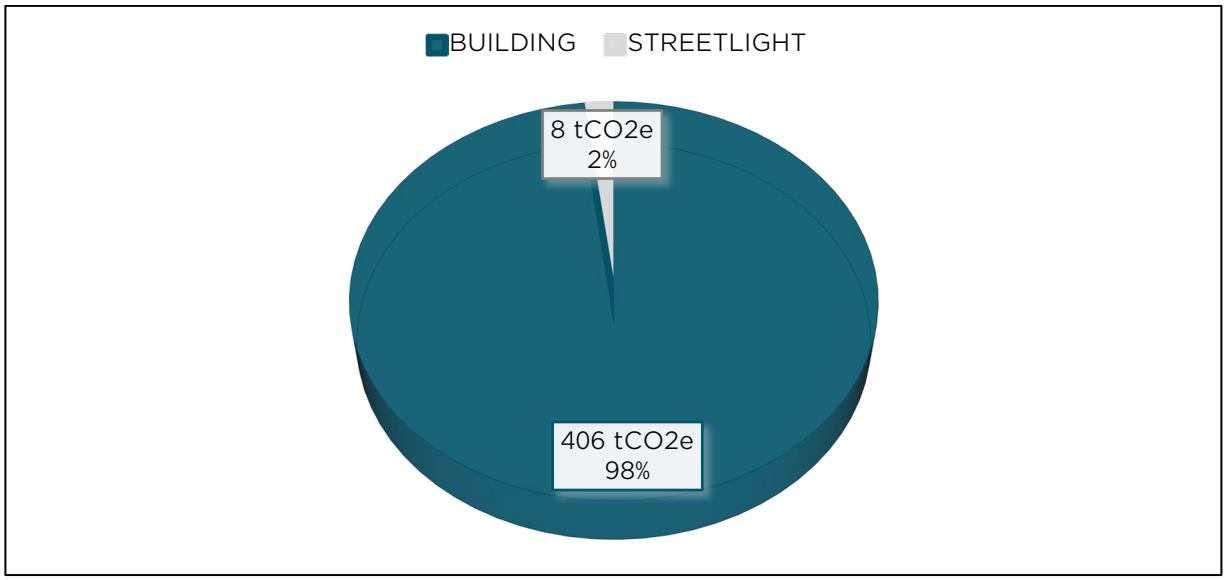

Figure 1: Breakdown of 2018 GHG emissions (tCO2e) for all corporate assets

Figure 2 contains data on building GHG emissions over the past six years (2018 – 2023). Electricity consumption fluctuated over time, but it consistently produced the lowest GHG emissions compared to other fuel types. Propane emissions exhibited a gradual upward trend, with a notable decrease in 2021 due to a drop in consumption most likely impacted by COVID-19. Fuel oil emissions decreased from 2018 to 2021 but increased significantly from 2022 onward due to

higher consumption, and potentially aging equipment. Energy consumption data is shown in Figure 3.

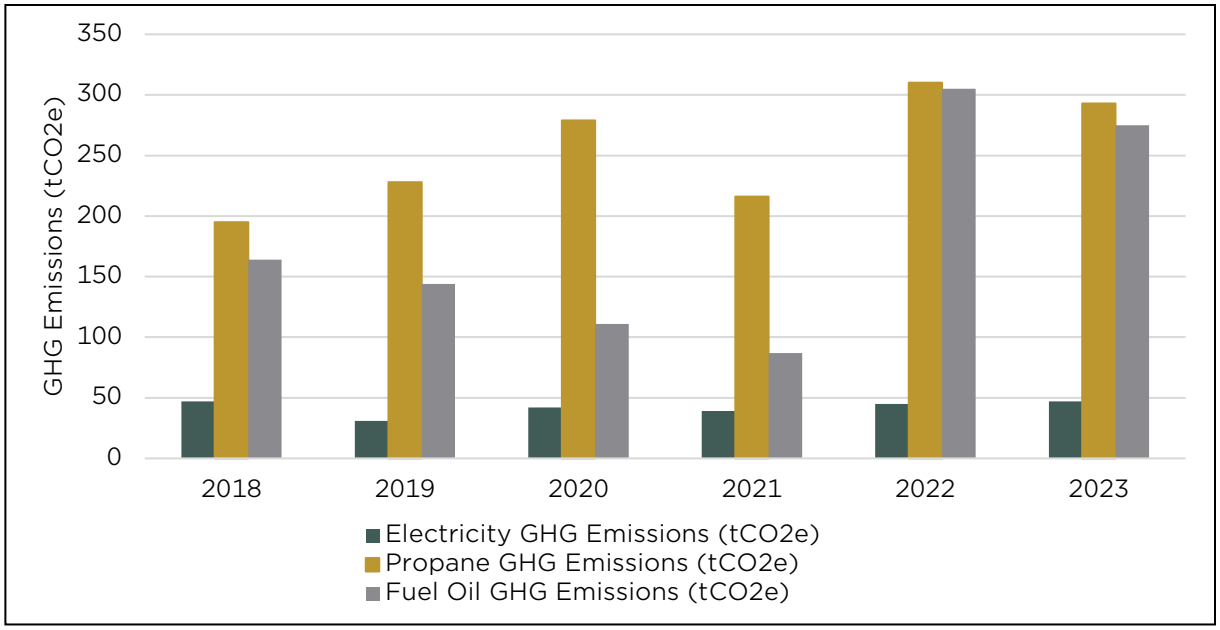

Figure 2. GHG Emissions for Township Buildings 2018 – 2023

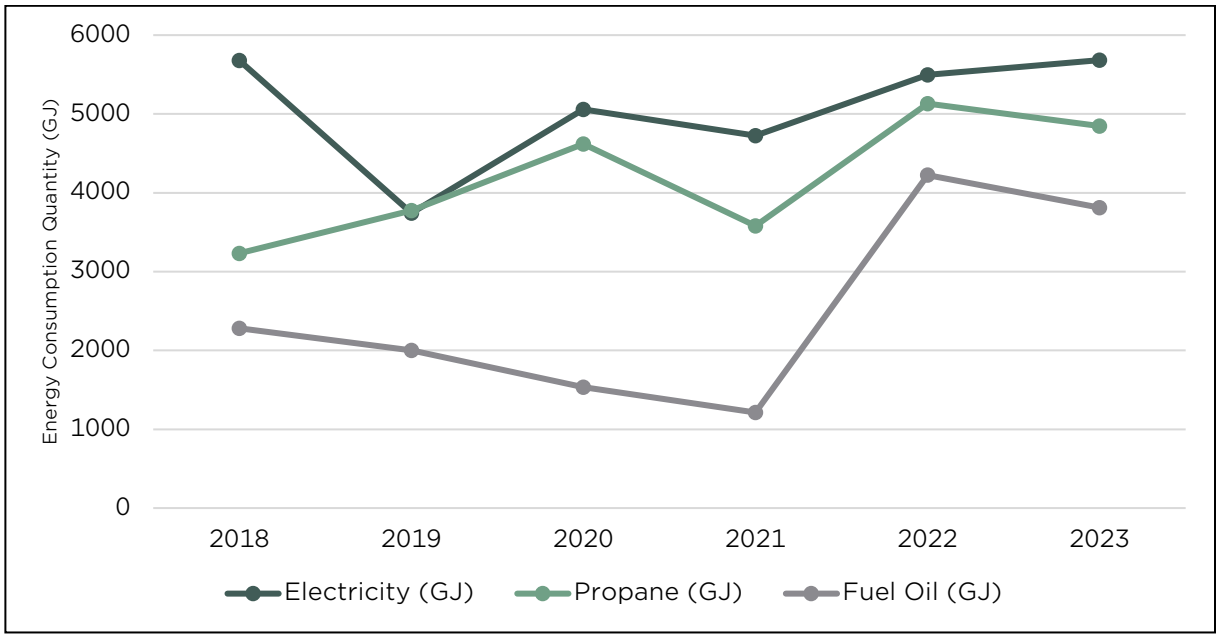

Figure 3. Energy Consumption for Township Buildings 2018 – 2023

4.2 BUILDING ENERGY BENCHMARK PERFORMANCE (2018 BASELINE)

The primary energy sources for the Township buildings are electricity, fuel oil, and propane. Fuel oil, an older and less clean energy source, along with propane, are predominantly used for heating the buildings during the winter months and domestic hot water. Some facilities also utilize electric heating systems.

An analysis of the installation year of the heating equipment reveals a sizable number of these systems have surpassed their expected lifespan, indicating a potential need for upgrades or replacements.

When examining the GHG emissions from these buildings, it is observed the Community Centres are the largest contributors, followed by the Public Works Yards and Arenas. Notably, the Milford Bay Community Centre stands out as the single largest emitter of GHGs. Summary result is shown in Table 4 below.

Table 4: Building Facilities GHG Emission by Facility Type for the 2018 Baseline Year

FACILITY TYPE	NO.	TOTAL GHG EMISSIONS (tCO_2e)	% OF TOTAL GHG EMISSIONS
Administration	2	40	10%
Arena	2	57	14%
Community Centre	13	177	43%
Fire Hall	9	49	12%
Public Library	1	19	5%
Public Works Yard	3	65	16%
Total	**30**	**407**	**100%**

Energy Use Intensity (EUI) is a key metric used to benchmark a building's energy performance. It expresses a building's energy use per floor area. It is calculated by dividing the total energy consumed by the building by the total floor area of the building. Industry standard EUI benchmarks allow for comparison of a building's energy performance against similar buildings in the same sector. They provide a context for evaluating whether a building's EUI is relatively high or low.

By conducting a thorough review and quantification of the energy performance and GHG emissions of these buildings, we are better equipped to identify areas for improvement and implement strategies to reduce the environmental impact. This approach not only promotes

sustainability but also can lead to improved energy efficiency and cost savings. Table 5 showed a high-level overview of facility building EUI and benchmarked against industrial average.

Table 5: Building Facilities Energy Use and Energy Use Intensity (EUI) Benchmark (Based on 2018 Baseline)

FACILITY TYPE	NO.	TOTAL FLOOR AREA (ft^2)	TOTAL ELECTRICITY USED (kWh)	TOTAL FUEL OIL USED (L)	TOTAL PROPANE USED (L)	AVG. BUILDING EUI ($ekBTU/ft^2$)	INDUSTRY STANDARD EUI ($ekBTU/ft^2$)
Administration	2	19,078	193,786	0	22,500	48	53
Arena	2	51,437	609,077	8,442	10,267	50	51
Community Centre	13	68,442	435,881	47,881	19,494	62	56
Fire Hall	9	32,515	153,027	3,231	23,101	42	64
Public Library	1	7,500	87,265	0	10,954	72	72
Public Works Yard	3	12,576	98,936	0	39,992	97	48
Total	**30**	**191,548**	**1,577,972**	**59,554**	**126,308**	**-**	**-**

Table 5 reveals several key trends and observations regarding energy use and efficiency across several types of facilities. The Community Centre and Public Works Yard buildings exhibit higher EUIs compared to the industry benchmarks, indicating potentially less efficient energy use. This might be due to older HVAC systems, poor building airtightness or other envelope deficiencies, or building operations leading to higher energy consumption. The Arena shows EUI close to the industry standards, indicating moderate energy efficiency.

It is important to recognize the average EUI values presented do not capture the performance of individual buildings. Facilities with older HVAC equipment or infrastructure are likely to skew these averages, highlighting the need for targeted upgrades and energy efficiency improvements in specific buildings to achieve better overall performance.

4.3 PAST ENERGY CONSERVATION PROJECTS

To date the Township successfully implemented many LED retrofits for streetlights and Township's arena lighting. It represents a significant step towards energy conservation and demand management. LEDs, known for their exceptional energy efficiency, consume up to 90% less power than traditional incandescent bulbs, leading to substantial energy cost savings. They also have a longer lifespan, resulting in less waste, and provide superior light quality, improving

safety and visibility in streets and arenas. Using LED luminaires instead of High-Pressure Sodium (HPS) results in significant energy savings, averaging 38-59% for neutral white (NW) or warm white (WW) LEDs [6].

Beyond these lighting improvements, the Township has undertaken various additional energy-saving measures across multiple facilities. For example, the Bala Arena installed new emergency lights in 2020 and a boiler and chiller in 2021. Similar retrofits were implemented in other community centers and public buildings, including new LED lights, furnaces, A/C units, and hot water tanks at facilities like Port Carling Community Centre, Glen Orchard Community Centre, and Raymond Fire Hall. Shown in the Table 6 below, these upgrades, completed between 2019 and 2023, reflect a broad commitment to improving energy efficiency, reducing costs, and enhancing infrastructure resilience across Township facilities.

Table 6. Township of Muskoka Lakes Retrofit and Upgrade Activities Completed between 2019 - 2023

FACILITY	DESCRIPTION OF NEW MEASURES	QUANTITY	COST OF EQUIPMENT	COMPLETION YEAR
Bala Arena	Emergency Lights	17	$3,825	2020
Bala Arena	Boiler	1	$40,000	2021
Bala Arena	Chiller	1	$89,000	2021
Glen Orchard Community Centre	Propane Furnace	1	$7,000	2020
Milford Bay Community Centre	A/C Unit	1	$7,500	2019
Port Carling Community Centre	LED Lights	12	$9,360	2022
Raymond Community Centre	Propane Furnace	1	$5,000	2021
Raymond Community Centre	A/C Unit	1	$6,500	2019
Torrance Community Centre	Hot Water Tank	1	$2,000	2020
Ullswater Community Centre	Propane Furnace	1	$5,000	2019
Glen Orchard Community Centre	Forced Air Electric Heating	1	$800	2020
Raymond Fire Hall	Windows	4	$3,000	2020

FACILITY	DESCRIPTION OF NEW MEASURES	QUANTITY	COST OF EQUIPMENT	COMPLETION YEAR
Walker's Point Fire Hall	Propane Furnace	1	$5,500	2023
Walker's Point Fire Hall	Hot Water Tank	1	$2,500	2020
Glen Orchard Public Works Yard	Hot Water Tank	1	$2,500	2020
Patterson Public Works Yard	LED Lights	3	$1,350	2021

5 Future Projections (2024-2050)

To estimate how Township's GHG emissions and energy use will increase in the next five years a GHG emission and energy use forecasting was completed for the Township operations. This forecast analysis is based on 2018 baseline data and projects the growth and climate-related changes in the Township up to the year 2050. The data sources include "The District Municipality of Muskoka's Phase 1 Growth Update" (Watson and Associates, 2024), Census data for Township of Muskoka Lakes (Statistics Canada, 2023), the Township of Muskoka Lakes Official Plan (Muskoka Lakes, 2023), and Community Centre information available on the Township's website. Below are assumptions made when developing the GHG emissions forecast.

5.1 URBANIZATION AND BUILDING DEVELOPMENTS

5.1.1 Primary and Secondary Growth Areas

Urban Centres: The primary growth areas within Muskoka Lakes are the Urban Centres located in Port Carling and Bala. These centres are expected to experience the most significant population growth and urban development.

Community Areas: The five Community Areas outside of the Urban Centres are designated as secondary growth areas. Development in these areas will be limited to infilling and minor rounding of existing developments. Additionally, Minett Resort Village named after early settler Charles James Minett, is projected to grow to a vibrant resort village due to the iconic Clevelands House and JW Marriott The Rosseau Muskoka. Known for its scenic views of Lake Rosseau, water sports, golf, and dining options, Minett attracts numerous visitors each year. As a popular destination, Minett's growth potential warrants consideration in regional planning to accommodate its impact on infrastructure and population.

Development Restrictions: There are no plans for new developmental communities within Muskoka Lakes, per the current official plan.

5.1.2 Community Infrastructure

Community Centres: Due to the development restrictions in secondary growth areas, it is unlikely new community centres, recreation centres, or arenas will be constructed outside the primary growth areas. However, the Township may be pursuing new/reconstructed arenas.

New Dwellings: Future residential developments will predominantly consist of seasonal dwellings in the Waterfront Area designation.

Commercial/Resort Development: Opportunities for additional wellness, cultural, community, recreation, sport, and leisure facilities are supported within commercial and resort development areas.

Building emissions are projected to increase, considering factors such as population growth, climatic design data such as higher cooling loads in summer, and reduced heating loads in winter. This projection accounts for any increase due to new buildings, extended operating hours, and additional equipment in existing buildings. Major new constructions, such as arenas, are not anticipated.

5.2 CLIMATE CHANGE IMPACT ON BUILDING ENERGY DEMAND

The analysis assumes a global warming scenario of 2 degrees Celsius by 2050 relative to the 1986-2016 baseline. This is based on the Environment and Climate Change Canada (ECCC) publication "An Assessment of the Impact of Climate Change on Climatic Design Data in Canada."

5.2.1 Heating and Cooling Demand

Heating Demand: Modelled changes in heating degree days indicate a decrease in building heating demand by 5.1%, attributed to warmer winters.

Cooling Demand[1]: Conversely, modelled building cooling demand is expected to increase by 50%-100% due to warmer summers [7].

5.3 STREETLIGHTS

Given most growth will be compact and involve infilling, it is assumed new commercial developments will occur in areas with existing roads and streetlights. According to the Joint Muskoka Growth Strategy (2024), future housing units will generally be targeted toward a lower Persons Per Unit (PPU) due to declining household sizes. However, these new housing units are expected to be located in any potential new subdivision, (if any), needing the construction of new roads and streetlights.

The assumption is any potential new subdivision, (if any) will be accessible via existing roadways with existing streetlights, considering the development growth plans which foresee a higher proportion of high-density dwellings compared to low-density ones. The forecasted number of

[1] The study indicates a future increase in cooling EUIs of on average 50-100% depending on building type; however, due to the nature of Ontario's electricity grid this increase is unlikely to result in a significant change in overall GHG emissions.

streetlights is based on the projected number of housing units as outlined in the Joint Muskoka Growth Strategy (2024). It is also assumed all new streetlight bulbs will be LED lightbulbs.

5.4 FORECASTING RESULT

Figure 4 and Figure 5 below illustrates the actual and projected GHG emissions and fuel costs from 2024 to 2050 for the Township. The analysis considers the impact of urbanization, building development, and climate change on building demand, and streetlighting.

- Baseline Data (2018): The data points for 2018 are based on accurate energy usage data collected by the Township.
- Forecast Data (2024-2050): The projections from 2024 to 2050 are based on anticipated population growth, urbanization within Township, and the impact of climate change, with baseline year of 2018.

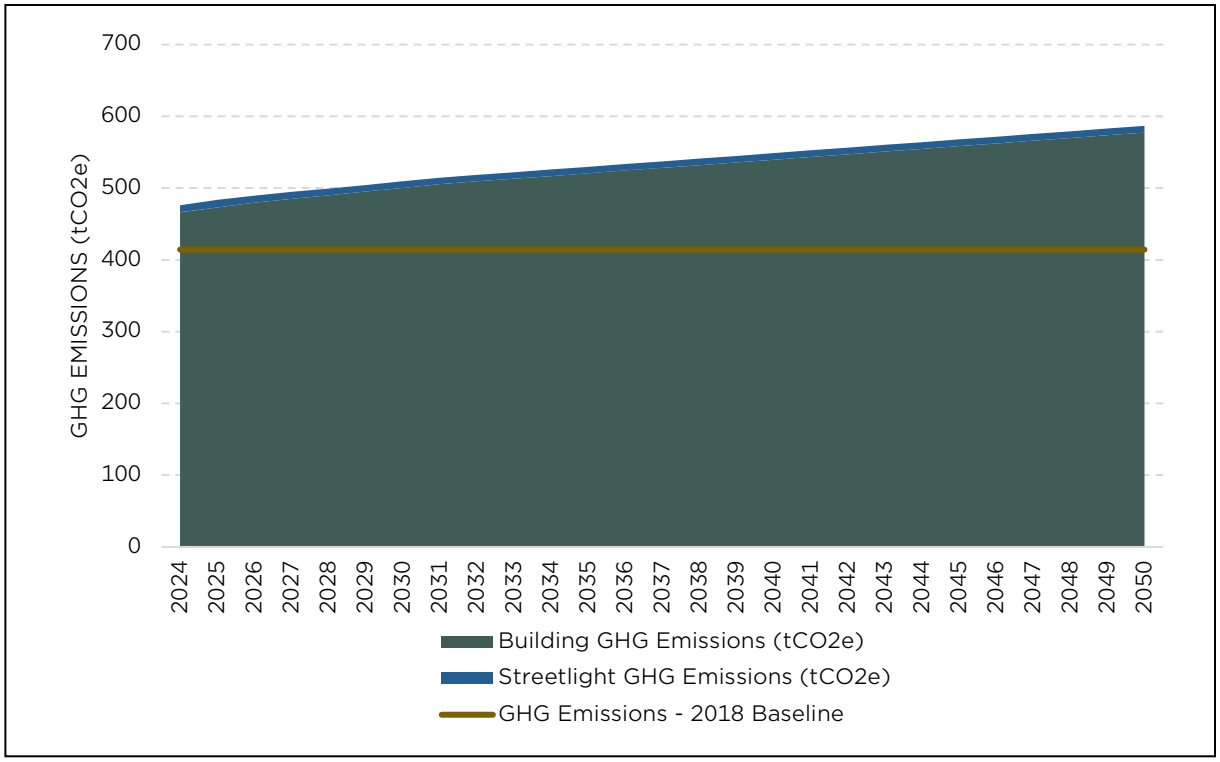

Figure 4. Forecast of Greenhouse Gas Emissions for Township of Muskoka Lakes

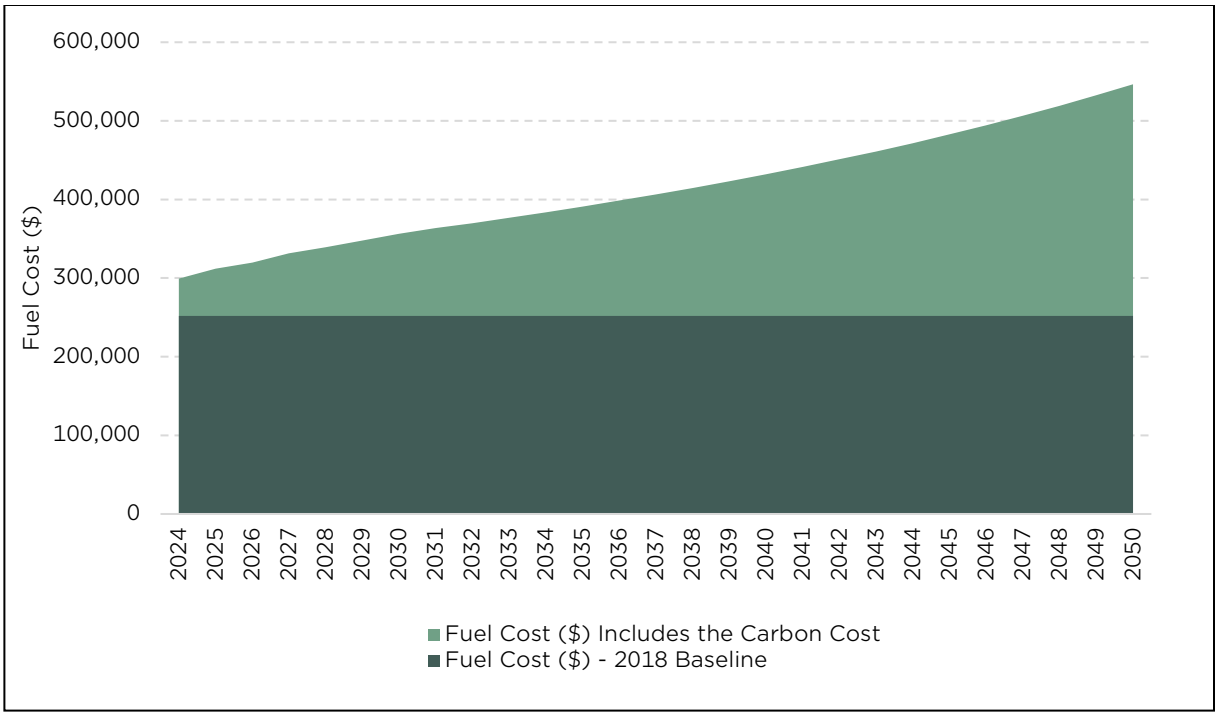

Figure 5. Forecast of Fuel Cost for Township of Muskoka Lakes

Streetlight Emissions (tCO2e): This component remains relatively constant, reflecting the assumption new commercial developments will occur in areas with existing infrastructure.

Building Emissions (tCO2e): Building emissions are projected to grow in line with population increases and urban development. This includes considerations of seasonal dwellings.

Overall GHG Emissions (tCO2e): The total GHG emissions, depicted by the stacked column (Building and Streetlight Emissions), show a gradual increase over the forecast period.

Fuel Costs ($): The lighter green area represents the fuel costs, which include the carbon cost. These costs are projected to rise significantly, reflecting increased building energy usage and the associated emissions as well as the significant increase in cost of carbon. Additionally, it assumed the price for natural gas, propane, fuel oil, and other fuels will increase by 5% annually after 2030. It is assumed the electricity price will be fixed after 2030 because Ontario is expected to have enough capacity through demand forecasting, capacity planning and conservation programs, with no need to import electricity.

The forecast incorporates the expected effects of climate change, including increased cooling demand and decreased heating demand due to global warming. This is based on a projected 2-degree Celsius increase in global temperatures by 2050 compared to the 1986-2016 baseline.

The two figures above provide a comprehensive overview of the anticipated growth in GHG emissions and fuel costs in Township, driven by urbanization, building development, and climate

change. It highlights the need for strategic planning to manage the increase in GHG emissions and costs and mitigate their economic and environmental impacts. This projection provides a framework for planning and adapting community infrastructure and environmental policies to accommodate future changes. The planning for GHG mitigation from corporate infrastructure is underway under the ReCCMP.

6 Existing Renewable Energy System

Renewable energy today is a critical part of the global shift toward sustainable power sources minimizing environmental impact. Common types of renewable energy include solar, wind, hydroelectric, geothermal, and biomass. These sources are considered renewable because they rely on naturally replenishing resources, unlike fossil fuels, which are finite and emit high levels of greenhouse gases. The Township has the following renewable energy system.

6.1 BURGESS 1 DAM

The Burgess 1 Dam, located in the Township of Muskoka Lakes and originally constructed between 1917 and 1922, is a small-scale hydroelectric generating station designed to provide renewable energy to the area. The facility, which includes a concrete gravity dam and powerhouse, operates two turbines generating approximately 245 kilowatts of electricity. These turbines have undergone multiple upgrades, including the recent installation of a new turbine and sluice gates. The dam is integrated with the local water management system, receiving water from Lake Muskoka and directing flow toward the Moon River through controlled outflows. Operating under KRIS Renewable Power Ltd., Burgess 1 Dam demonstrates the potential of smaller hydroelectric facilities to contribute to local renewable energy needs while supporting environmental and infrastructural stability.

Due to the Burgess 1 Dam facility being leased out and operated by KRIS Renewable Power Ltd., detailed data and operational metrics for the dam, such as real-time electricity production and maintenance schedules, are managed directly by the leasing company rather than by the Township of Muskoka Lakes. As a result, this facility is not included in this study, as it functions under a private operational model. The leasing arrangement enables KRIS Renewable Power Ltd. to oversee and optimize power generation while the Township maintains oversight of structural and environmental assessments to ensure compliance with applicable standards.

7 Proposed Energy Conservation, Demand Management and Sustainability Measures (2024-2029)

Energy efficiency and reducing emissions is a critical component of addressing climate change. The appropriate energy conservation and demand management measures will help the Township to reduce its GHG emissions, build a more sustainable future, foster a conservation and demand management (CDM) mindset across the organization, ensuring strong support and active participation from senior management and ultimately follow the goals and targets as outlined in the Regional Climate Change Mitigation Plan.

The following sections outline the proposed measures to consider for building sector.

7.1 BUILDINGS

To reduce energy use for buildings, a multi-faceted strategy encompassing technical energy conservation measures (ECM), sustainability efforts, organizational measures, procurement strategies, and behavioral measures is essential. It is necessary to note not all the following measures are applicable to all buildings. A more detailed assessment is required to identify the applicable sustainability options for corporate buildings.

7.1.1 Energy Conservation Measures

The Energy Conservation Measures outlined below are strategically designed to minimize energy consumption and enhance the efficiency of the Township's buildings. Increasing the building energy efficiency through enhancement in building HVAC systems (like air-sourced heat pumps, geothermal, high efficiency boilers, etc.) and building envelope improvements is the first and most important step in energy conservation. The lighting retrofit is another crucial measure, which includes a complete transition of all lighting systems to LED technology. LEDs are significantly more energy-efficient than traditional lighting systems, contributing to substantial energy savings. Additionally, submetering is a powerful tool for managing energy consumption, especially in large buildings where energy use can vary significantly across different systems. These improvements aim to minimize heat loss and gain, thereby maintaining a comfortable indoor temperature with less energy.

Develop a Low Carbon Building Policy:

- It is recommended the Township develop a building policy requiring all new buildings and major renovations to consider reducing its carbon footprint by achieving more energy efficiency beyond Ontario Building Code.

Consider HVAC Upgrades:

- When possible, consider transitioning existing HVAC systems to energy-efficient alternatives.
- Implement smart thermostats and energy management systems to optimize HVAC operation.
- Apply outdoor temperature resets for boiler systems.
- Enhance dehumidification capabilities.
- Integrate heat recovery for ventilation air

Lighting Retrofits:

- Complete retrofit of all lighting systems to LED technology.
- Install motion sensors and daylight harvesting systems to reduce unnecessary lighting use.

Building Envelope Improvements:

- Enhance insulation, seal windows doors to prevent air leakage.
- Enhance insulation in walls, roofs, and floors if possible to improve thermal resistance.
- Conduct energy audits to identify and address areas of heat loss and gain.
- Regularly inspect and maintain the building envelope to ensure continued efficiency.

Submetering of Major Energy User:

- Submeters enable precise tracking of major energy-consuming systems (HVAC, lighting, etc.), allowing for data-driven energy management and efficiency improvements.
- Granular energy data helps uncover hidden inefficiencies and verify the effectiveness of energy-saving initiatives in larger buildings.

7.1.2 Other Sustainability Efforts

Sustainability commitment can encompass various initiatives aimed at reducing environmental footprint. By creating programs around water and wastewater management, stormwater management, and waste management, the Township can make daily operation more sustainable. These programs can conserve water and other resources, with economic benefits.

Water and Wastewater Management:

- Install low-flow fixtures in bathrooms, kitchens, and other water-use areas across facilities to reduce water consumption.
- Implement water recycling systems for greywater reuse.
- Reduce hot water consumption in pools, arenas, and offices through efficient water heating systems and behavioral changes.
- Implement sub-metering for major water consumption areas to track usage, identify, inefficiencies, and optimize water management.

Stormwater Management:

- Implement rainwater harvesting system, where possible/feasible.

Waste Management:

- Enhance recycling and composting programs to reduce landfill waste.

7.1.3 Organizational Measures

Organizational Measures are essential for ensuring sustainability and energy efficiency are integrated into the core operations of the Township. These policies and reporting mechanisms can help in setting clear guidelines, monitoring progress, and achieving long-term sustainability goals. Below are some recommended measures:

Energy Management Policies:

- Develop and enforce comprehensive energy management policies.
- Set specific short-term energy reduction targets and monitor progress regularly.

Sustainability Reporting:

- Implement regular sustainability reporting to track progress and identify areas for improvement.

Sustainable New Building Policy:

- Consider developing policies ensuring all new additional buildings are net-zero or net-zero energy ready.
- Continuously update policies to align with the latest sustainability standards and practices.

7.1.4 Procurement Strategies

Effective procurement strategies are essential for the Township aiming to enhance sustainability and operational efficiency. By adopting sustainable procurement practices, forming strategic vendor partnerships, and integrating circular economy principles, Township can significantly reduce their environmental impact and promote long-term economic viability.

Sustainable Procurement:

- Prioritize the procurement of energy-efficient and sustainably produced products when possible.
- Source materials and products locally to minimize scope 2 and 3 GHG emissions.

Vendor Partnerships:

- Partner with vendors and contractors who commit to sustainability practices.

Circular Economy Practices:

- Fully integrate circular economy principles into procurement processes.
- Focus on products and materials to be reused, recycled, or composted at the end of their lifecycle.

7.1.5 Behavioral Measures

Implementing behavioral measures is crucial for creating a culture of sustainability within the Township. By focusing on staff training, awareness programs, and fostering a sustainability culture, Township can encourage environmentally responsible behaviors and achieve energy and resource savings.

Staff Training:

- Conduct training sessions to educate staff on sustainable practices and energy conservation techniques.
- Encourage energy-saving behaviors such as turning off lights, and equipment when not in use.

Awareness Programs:

- Launch awareness campaigns to promote sustainability initiatives and engage building and facility occupants.
- Establish “green” teams to champion sustainability efforts within each facility. Encourage competitions between teams to encourage uptake.

Sustainability Culture:

- Foster a culture of sustainability where every decision incorporates environmental considerations.
- Implement reward programs for staff and departments achieving significant energy and water savings.

By integrating these energy conservation measures across technical, organizational, procurement, and behavioral domains, the buildings and facilities can significantly reduce their energy use, carbon footprint and move towards a more sustainable future.

8 Strategies to Achieve 2024-2029 Goals

This CDM plan focuses on building enhancements to conserve energy and reduce GHG emissions, with focus on near-term (2024-2029). Below are suggested strategies for implementing the proposed measures to make sure Township achieves their 2024-2029 goal. These recommendations serve as a general guide and can be adjusted on a per-facility basis to accommodate the specific needs and characteristics of each facility. Tailoring the strategies to the Township's unique operational and environmental goals will ensure improvements are both practical and effective, maximizing energy efficiency and long-term sustainability for each facility.

8.1 STRATEGIES FOR BUILDING ENERGY EFFICIENCY IMRPOVEMENT

To improve the energy efficiency of Township buildings, a comprehensive approach will begin with detailed building energy audits. These audits will identify key areas for improvement, such as major energy-consuming systems and issues within the building envelope, allowing for targeted interventions. Based on audit findings, measures like submetering and building envelope enhancements will be implemented to reduce energy consumption and improve overall efficiency.

8.1.1 Assessment, Planning, and Implementation (2024-2029)

The initial phase will involve the following steps to assess and enhance building energy efficiency:

- **Conduct Building Energy Audits:** Perform thorough energy audits across all facilities to identify areas of heat loss, inefficient energy usage, and opportunities for improvement.
- **Implement Submetering:** Install submeters on major energy-consuming systems, such as HVAC and major equipment, to gather detailed data and uncover hidden inefficiencies.
- **Enhance Building Envelope:** Based on audit results, improve insulation in walls, roofs, and floors, and seal windows and doors to reduce air leakage, minimizing heating and cooling demands.
- **Study Alternative Energy Efficient Mechanical Systems:** building mechanical systems can be improved by studying and implementing energy efficient alternative systems.
- **Regular Maintenance and Monitoring:** Establish a schedule for routine inspection and maintenance to ensure continued building envelope efficiency and optimal performance of energy-saving measures.

- **Sequence and Prioritization:** Prioritize buildings based on energy savings potential and return on investment (ROI).

8.2 STRATEGIES FOR LED LIGHTING REPLACEMENT

The plan aims to replace all existing lighting systems with energy-efficient LED lights.

8.2.1 Assessment, Planning, and Implementation (2024-2029)

The following actions will be taken to identify priorities and implementation planning:

- Conduct an audit to document existing lighting systems and identify replacement needs.
- Develop a budget for the lighting retrofit project and explore funding options, including rebates and incentives.
- Procure LED lighting fixtures and controls. Prioritize high-usage areas such as offices, halls, and outdoor spaces for initial replacements. Additional technologies can be installed include motion sensors and daylight harvesting systems, which can improve efficiency.
- Train maintenance staff on LED technology and launch awareness campaigns to inform building occupants about the benefits of LED lighting.

8.3 STRATEGIES FOR WATER AND WASTEWATER CONSERVATION

To promote water conservation and improve the sustainability of the Township's facilities, this strategy begins with a comprehensive assessment of water use across all buildings and operations. Through targeted improvements, such as the installation of low-flow fixtures, water recycling systems, and efficient water heating methods, this plan aims to reduce water consumption, improve wastewater management, and maximize resource efficiency. Based on findings, measures like sub-metering and behavioral changes will be implemented to optimize water use and achieve long-term sustainability.

8.3.1 Assessment, Planning, and Implementation (2024 – 2029)

The initial phase involves assessing current water usage and implementing targeted improvements to enhance water and wastewater management:

- **Conduct Water Use Audit:** Perform thorough audits of water usage across all facilities, identifying areas with the highest consumption and potential for water savings.
- **Install Low-Flow Fixtures:** Upgrade bathrooms, kitchens, and other water-use areas with low-flow fixtures to reduce water consumption while maintaining functionality.

- **Implement Water Recycling and Greywater Systems:** Where feasible, install greywater recycling systems to reuse water for non-potable applications, such as irrigation, reducing overall water demand.
- **Optimize Hot Water Consumption:** Reduce hot water use in high-demand areas, such as pools, arenas, and offices, through efficient water heating systems and behavioral adjustments.
- **Sub-metering for Water Management:** Install submeters in key water-use areas to monitor consumption, identify inefficiencies, and improve data-driven water management strategies.

8.4 MONITORING AND EVALUATION

A robust monitoring and evaluation strategy is essential to ensure the successful implementation of the building improvements, LED replacement, and other programs and confirming the energy saving and GHG reductions associated with these plans. This allows the Township to track progress and measure success. The monitoring strategy includes tracking utility bills, regular reporting, and adaptive management to ensure continuous improvement.

8.4.1 Baseline Establishment (2018-2024)

The baseline energy and GHG emissions was established for buildings for year 2018. Energy and GHG emissions for buildings are continued to be monitored until the year 2023. It is recommended to monitor GHG emissions moving forward by implementing the suggested practices.:

- Collect baseline data on energy consumption, GHG emissions.
- Establish key performance indicators (KPIs) for energy savings, emissions reductions, and project milestones.
- Record current utility bills to establish a baseline for future comparisons.

8.4.2 Ongoing Monitoring (2024-2029)

Ongoing monitoring is essential to ensure energy conservation strategies are effective and achieving desired outcomes. By systematically tracking utility bills and fuel usage, organizations can identify trends, measure progress, and make informed decisions to enhance performance. Regular performance reviews and the application of the Plan-Do-Check-Act (PDCA) cycle will help maintain continuous improvement and adapt strategies as needed.

Monitoring Activities:

- Keep track of utility bills for all buildings and facilities to monitor energy consumption. Analyze utility bills at the end of each calendar year to assess if the consumption is reduced.
- Complete annual energy consumption reporting based on the O.Reg. 25/23 and use the data to measure and monitor overall progress.

Performance Reviews:

Conduct quarterly and annual performance reviews to evaluate progress against KPIs. If the Township does not see the expected changes, initiate the Plan-Do-Check-Act (PDCA) cycle:

- **Plan**: Reassess goals and strategies, identify potential issues.
- **Do**: Implement necessary adjustments or corrective actions.
- **Check**: Evaluate the effectiveness of the changes made.
- **Act**: Refine the plan based on evaluation results to ensure continuous improvement.

Adaptive Management:

- Continuously refine and adapt strategies based on monitoring and evaluation results.
- Integrate new technologies and best practices to enhance energy conservation efforts.

Stakeholder Engagement:

- Engage stakeholders, including staff, contractors, and community members, in the evaluation process.
- Share successes and lessons learned to foster a culture of sustainability and continuous improvement.

9 Resourcing and Support

9.1 FUNDING OPPORTUNITIES

To achieve the conservation and demand management goals, the Township can utilize available Provincial and Federal programs to support its efforts in demand management and energy efficiency:

- Federation of Canadian Municipalities (FCM) Green Municipal Fund.
- Save On Energy: Incentive and energy management training programs delivered by the Independent Electricity System Operator.
- Natural Gas Demand Side Management (DSM): Incentive and energy management training programs delivered by Enbridge Gas Inc.
- Capacity Auction: Delivered by the Independent Electricity System Operator to support demand management.
- Industrial Conservation Initiative: Offered by the Independent Electricity System Operator to reduce energy consumption during peak periods.
- Ontario Net Metering Program: Offered by your local distribution company to enable self-generation of electricity and reduce grid reliance.
- Federal Initiatives from Natural Resources Canada (NRCan): Provide additional support for energy efficiency and conservation measures.

By leveraging these programs, the Township can enhance its energy efficiency efforts and progress towards its conservation and demand management goals.

9.2 RESOURCE ALLOCATION

To effectively allocate resources and achieve the CDM goals, the Township should consider both internal capacity and external partnerships. Internally, it is crucial to designate a specific department to manage CDM efforts and keep the plan on track. This department should be able to monitor progress, implement energy-saving measures, and report on outcomes.

Externally, fostering partnerships and collaborations with relevant organizations will be equally important. By working with energy providers, local businesses, and governmental agencies, the Township can leverage expertise, access additional funding and incentives, and share best practices to enhance its energy efficiency and conservation efforts. These collaborations will amplify the impact of the CDM initiatives, ensuring a comprehensive and effective approach to achieving sustainability goals.

10 Finalizing and Sharing the Plan

10.1 COMMUNICATION STRATEGY

The internal communication plan will involve regular updates and briefings for all relevant departments within the Township to ensure alignment and understanding of the CDM goals and progress. This can include scheduled meetings, newsletters, and an internal portal for sharing information, project updates, and available resources.

Externally, the communication plan will include outreach to the community through the Township's website, social media channels, and local media. Public information sessions and workshops can be organized to inform residents and businesses about the CDM initiatives and inform them about the progress made.

10.2 PUBLICATION AND REPORTING

Posting the CDM Plan on the Organization's Website:

As required by the O.Reg. 25/23, the CDM plan will be posted on the Township's official website, ensuring easy access for all residents, businesses, and stakeholders.

Making Hard Copies Available at the Main Township Building:

To ensure accessibility for all community members, hard copies of the CDM plan will be made available at the main Township building.

Reporting Progress to the Ministry of Energy:

The Township will report progress to the Ministry of Energy by sharing a link to the CDM plan and its updates on the Township's website. These reports will ensure transparency and accountability and help align the Township's efforts with provincial energy conservation goals.

By implementing this comprehensive communication strategy and thorough publication and reporting process, the Township will ensure the CDM plan is effectively shared, understood, and supported by all stakeholders, paving the way for successful implementation and achievement of the conservation goals.

11 References

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[2] Government of Ontario, "O. Reg. 25/23: BROADER PUBLIC SECTOR: ENERGY REPORTING AND CONSERVATION AND DEMAND MANAGEMENT PLANS," 23 February 2023. [Online]. Available: https://www.ontario.ca/laws/regulation/r23025.

[3] Watson & Associates Economists Ltd., "District of Muskoka Growth Strategy - Growth Projections and Area Municipal Allocations Report - Phase 1," Muskoka, 2024.

[4] Ontario Ministry of Energy, "Best Practices for Updating Broader Public Sector (BPS) Energy Conservation and Demand Management (CDM) Plans," 2024.

[5] The District Municipality of Muskoka, "Muskoka's Regional Climate Change Adaptation Plan," Muskoka, 2023.

[6] D. M and K. M, "Comparison of energy efficiency and costs related to conventional and LED road lighting installations," *Energy,* vol. 254, p. 124299, 1 September 2022.

[7] U. Berardi and P. Jafarpur, "Assessing the impact of climate change on building heating and cooling energy demand in Canada," *Renewable and Sustainable Energy Reviews,* vol. 121, p. 109681, 2020.

Appendix A: Building Information, Energy and GHG Inventory 2018-2023

Conservation and Demand Management Plan
Building Information, Energy and GHG Inventory 2018-2023

Year: **2018**

Facility Description									Fuel and Energy Consumption			Energy Related GHG Emissions (tCO_2e)			Result
No.	Facility Name	Operation Type	Address	Community	Postal Code	Total Floor Area (m^2)	Year Built	Age	Electricity (kWh)	Fuel Oil 1 & 2 (L)	Propane (L)	Electricity GHG Emissions	Fuel Oil 1 & 2 GHG Emissions	Propane GHG Emissions	Total GHG Emissions (tCO2e)
1	Administration Building	Administration	1 Bailey Street	Port Carling	P0B 1J0	1,628	1973	45	191,340		20,590	5.65	0.00	31.80	37.45
2	Bala Arena	Arena	1009 Maple Avenue	Bala	P0B 1J0	2,199	1973	45	192,583	8,442		5.69	23.32	0.00	29.01
3	Bala Community Centre	Community Centre	1008 Maple Avenue	Bala	P0B 1J0	494	1953	65	21,668	7,619		0.64	21.04	0.00	21.68
4	Bala Fire Hall	Fire Hall	1015 Grey Street	Bala	P0B 1J0	297	2007	11	19,480		4,782	0.58	0.00	7.38	7.96
5	Foots Bay Community Centre	Community Centre	1006A Buckeye Road	Foots Bay	P0B 1J0	520	1979	39	26,830			0.79	0.00	0.00	0.79
6	Foots Bay Fire Hall	Fire Hall	1006 Buckeye Road	Foots Bay	P0B 1J0	250	1978	40	20,346			0.60	0.00	0.00	0.60
7	Glen Orchard Community Centre	Community Centre	3951 MR 169 Unit 3	Glen Orchard	P0B 1J0	279	1964	54	4,817	3,564		0.14	9.84	0.00	9.98
8	Glen Orchard Fire Hall	Fire Hall	3951 MR 169	Glen Orchard	P0B 1J0	197	1991	27	47,510			1.40	0.00	0.00	1.40
9	Glen Orchard Public Works Yard	Public Works Yard	3951 MR 169	Glen Orchard	P0B 1J0	408	1991	27	32,932		11,159	0.97	0.00	17.23	18.21
10	Hekkla Community Centre	Community Centre	1448 Hekkla Road	Rosseau	P0B 1J0	149	1930	88	3,273	2,453		0.10	6.77	0.00	6.87
11	Milford Bay Community Centre	Community Centre	1020 Beaumaris Road	Milford Bay	P0B 1J0	1,026	1979	39	31,537	22,349	1,140	0.93	61.73	1.76	64.42
12	Milford Bay Fire Hall	Fire Hall	1229 Milford Bay Road	Milford Bay	P0B 1J0	235	1976	42	15,514	3,231		0.46	8.92	0.00	9.38
13	Patterson Public Works Yard	Public Works Yard	1078 Raymond Road	Utterson	P0B 1J0	307	1977	41	43,613		8,450	1.29	0.00	13.05	14.34
14	Peninsula Recreation Centre	Community Centre	1131 Juddhaven Road	Minett	P0B 1J0	805	1986	32	65,395	3,061		1.93	8.46	0.00	10.39
15	Port Carling Arena	Arena	3 Bailey Street	Port Carling	P0B 1J0	2,580	1973	45	416,494		10,267	12.31	0.00	15.86	28.16
16	Port Carling Community Centre	Community Centre	3A Bailey Street	Port Carling	P0B 1J0	818	2000	18	92,960		10,267	2.75	0.00	15.86	18.60
17	Port Carling Fire Hall	Fire Hall	1 Lee Valley Drive	Port Carling	P0B 1J0	566	2007	11	20,943		6,890	0.62	0.00	10.64	11.26
18	Port Carling Library	Public Library	69 Joseph St. Port Carling	Port Carling	P0B 1J0	697	2000	18	87,265		10,954	2.58	0.00	16.92	19.49
19	Ranwood Public Works Yard	Public Works Yard	1050 Ranwood Road	Milford Bay	P0B 1J0	453	1977	41	22,391		20,382	0.66	0.00	31.48	32.14
20	Raymond Community Centre	Community Centre	2013 Hwy 141	Utterson	P0B 1J0	474	1983	35		4,113	698	0.00	11.36	1.08	12.44
21	Raymond Fire Hall	Fire Hall	1002 Spring Street	Utterson	P0B 1J0	158	1981	37	3,543		1,993	0.10	0.00	3.08	3.18
22	Torrance Community Centre	Community Centre	1030 Torrance Road	Torrance	P0B 1J0	557	1997	21	24,517	3,689	3,681	0.72	10.19	5.68	16.60
23	Torrance Fire Hall	Fire Hall	1030 Torrance Road	Torrance	P0B 1J0	720	1985	33	18,626			0.55	0.00	0.00	0.55
24	Ullswater Community Hall	Community Centre	1503 Old Parry Sound Road	Ullswater	P0B 1J0	330	1975	43	6,947		3,708	0.21	0.00	5.73	5.93
25	Visitors Centre	Administration	3181 Muskoka Road 169	Bala	P0B 1J0	144	< 2009	10 +	2,446		1,910	0.07	0.00	2.95	3.02
26	Walkers Point Community Centre	Community Centre	1074 Walker's Point Road	Torrance	P0B 1J0	474	1978	40	125,360			3.70	0.00	0.00	3.70
27	Walkers Point Fire Hall	Fire Hall	1074 Walker's Point Road	Torrance	P0B 1J0	284	2008	10	938		5,016	0.03	0.00	7.75	7.77
28	Windermere Community Centre	Community Centre	2416 Windermere Road	Windermere	P0B 1J0	323	1912	106	2,874			0.08	0.00	0.00	0.08
29	Windermere Fire Hall	Fire Hall	2201 Windermere Road	Windermere	P0B 1J0	314	1995	23	6,128		4,421	0.18	0.00	6.83	7.01
30	Windermere Village Hall	Community Centre	2496 Windermere Road	Windermere	P0B 1J0	111	1953	65	29,704	1,034		0.88	2.86	0.00	3.73

Conservation and Demand Management Plan
Building Information, Energy and GHG Inventory 2018-2023

Year: **2019**

Facility Description									Fuel and Energy Consumption			Energy Related GHG Emissions (tCO_2e)			Results
No.	Facility Name	Operation Type	Address	Community	Postal Code	Total Floor Area (m^2)	Year Built	Age	Electricity (kWh)	Fuel Oil 1 & 2 (L)	Propane (L)	Electricity GHG Emissions	Fuel Oil 1 & 2 GHG Emissions	Propane GHG Emissions	Total GHG Emissions (tCO2e)
1	Administration Building	Administration	1 Bailey Street	Port Carling	P0B 1J0	1,628	1973	46	214,320	0	24,091	6.33	0.00	37.20	43.54
2	Bala Arena	Arena	1009 Maple Avenue	Bala	P0B 1J0	2,199	1973	46	9,806	10,360	0	0.29	28.61	0.00	28.90
3	Bala Community Centre	Community Centre	1008 Maple Avenue	Bala	P0B 1J0	494	1953	66	47,901	8,146	0	1.42	22.50	0.00	23.91
4	Bala Fire Hall	Fire Hall	1015 Grey Street	Bala	P0B 1J0	297	2007	12	17,387	0	6,329	0.51	0.00	9.77	10.29
5	Foots Bay Community Centre	Community Centre	1006A Buckeye Road	Foots Bay	P0B 1J0	520	1979	40	36,397	0	0	1.08	0.00	0.00	1.08
6	Foots Bay Fire Hall	Fire Hall	1006 Buckeye Road	Foots Bay	P0B 1J0	250	1978	41	22,657	0	0	0.67	0.00	0.00	0.67
7	Glen Orchard Community Centre	Community Centre	3951 MR 169 Unit 3	Glen Orchard	P0B 1J0	279	1964	55	7,055	3,212	0	0.21	8.87	0.00	9.08
8	Glen Orchard Fire Hall	Fire Hall	3951 MR 169	Glen Orchard	P0B 1J0	197	1991	28	49,381	0	0	1.46	0.00	0.00	1.46
9	Glen Orchard Public Works Yard	Public Works Yard	3951 MR 169	Glen Orchard	P0B 1J0	408	1991	28	33,150	0	9,242	0.98	0.00	14.27	15.25
10	Hekkla Community Centre	Community Centre	1448 Hekkla Road	Rosseau	P0B 1J0	149	1930	89	22,854	0	0	0.68	0.00	0.00	0.68
11	Milford Bay Community Centre	Community Centre	1020 Beaumaris Road	Milford Bay	P0B 1J0	1,026	1979	40	34,034	12,305	2,100	1.01	33.99	3.24	38.24
12	Milford Bay Fire Hall	Fire Hall	1229 Milford Bay Road	Milford Bay	P0B 1J0	235	1976	43	19,315	4,677	0	0.57	12.92	0.00	13.49
13	Patterson Public Works Yard	Public Works Yard	1078 Raymond Road	Utterson	P0B 1J0	307	1977	42	41,781	0	11,908	1.23	0.00	18.39	19.62
14	Peninsula Recreation Centre	Recreation Centre	1131 Juddhaven Road	Minett	P0B 1J0	805	1986	33	68,918	4,573	0	2.04	12.63	0.00	14.67
15	Port Carling Arena	Arena	3 Bailey Street	Port Carling	P0B 1J0	2,580	1973	46	5,307	0	12,023	0.16	0.00	18.57	18.72
16	Port Carling Community Centre	Community Centre	3A Bailey Street	Port Carling	P0B 1J0	818	2000	19	83,412	0	12,023	2.46	0.00	18.57	21.03
17	Port Carling Fire Hall	Fire Hall	1 Lee Valley Drive	Port Carling	P0B 1J0	566	2007	12	22,151	0	8,537	0.65	0.00	13.18	13.84
18	Port Carling Library	Public Library	69 Joseph St. Port Carling	Port Carling	P0B 1J0	697	2000	19	88,023	0	12,576	2.60	0.00	19.42	22.02
19	Ranwood Public Works Yard	Public Works Yard	1050 Ranwood Road	Milford Bay	P0B 1J0	453	1977	42	44,563	0	18,090	1.32	0.00	27.94	29.25
20	Raymond Community Centre	Community Centre	2013 Hwy 141	Utterson	P0B 1J0	474	1983	36	22,604	4,761	1,948	0.67	13.15	3.01	16.83
21	Raymond Fire Hall	Fire Hall	1002 Spring Street	Utterson	P0B 1J0	158	1981	38	3,362	0	3,885	0.10	0.00	6.00	6.10
22	Torrance Community Centre	Community Centre	1030 Torrance Road	Torrance	P0B 1J0	557	1997	22	25,352	2,810	512	0.75	7.76	0.79	9.30
23	Torrance Fire Hall	Fire Hall	1030 Torrance Road	Torrance	P0B 1J0	720	1985	34	5,188	0	1,516	0.15	0.00	2.34	2.49
24	Ullswater Community Hall	Community Centre	1503 Old Parry Sound Road	Ullswater	P0B 1J0	330	1975	44	9,345	0	4,784	0.28	0.00	7.39	7.66
25	Visitors Centre	Administration	3181 Muskoka Road 169	Bala	P0B 1J0	144	< 2009	10 +	1,750	0	8,484	0.05	0.00	13.10	13.15
26	Walkers Point Community Centre	Community Centre	1074 Walker's Point Road	Torrance	P0B 1J0	474	1978	41	61,680	0	0	1.82	0.00	0.00	1.82
27	Walkers Point Fire Hall	Fire Hall	1074 Walker's Point Road	Torrance	P0B 1J0	284	2008	11	955	0	5,584	0.03	0.00	8.62	8.65
28	Windermere Community Centre	Community Centre	2416 Windermere Road	Windermere	P0B 1J0	323	1912	107	34,298	0	0	1.01	0.00	0.00	1.01
29	Windermere Fire Hall	Fire Hall	2201 Windermere Road	Windermere	P0B 1J0	314	1995	24	5,592	0	3,942	0.17	0.00	6.09	6.25
30	Windermere Village Hall	Community Centre	2496 Windermere Road	Windermere	P0B 1J0	111	1953	66	1,165	1,362	0	0.03	3.76	0.00	3.80

Conservation and Demand Management Plan
Building Information, Energy and GHG Inventory 2018-2023

Year: **2020**

Facility Description									Fuel and Energy Consumption			Energy Related GHG Emissions (kg CO_2e)			Energy Related GHG Emissions (tCO_2e)			Results
No.	Facility Name	Operation Type	Address	Community	Postal Code	Total Floor Area (m^2)	Year Built	Age	Electricity (kWh)	Fuel Oil 1 & 2 (L)	Propane (L)	Electricity GHG Emissions	Fuel Oil 1 & 2 GHG Emissions	Propane GHG Emissions	Electricity GHG Emissions	Fuel Oil 1 & 2 GHG Emissions	Propane GHG Emissions	Total GHG Emissions (tCO2e)
1	Administration Building	Administration	1 Bailey Street	Port Carling	P0B 1J0	1,628	1973	47	224,572	0	28,491	6,636	0	43,999	6.64	0.00	44.00	50.63
2	Bala Arena	Arena	1009 Maple Avenue	Bala	P0B 1J0	2,199	1973	47	149,627	8,667	766	4,421	23,937	1,184	4.42	23.94	1.18	29.54
3	Bala Community Centre	Community Centre	1008 Maple Avenue	Bala	P0B 1J0	494	1953	67	15,606	5,458	0	461	15,075	0	0.46	15.08	0.00	15.54
4	Bala Fire Hall	Fire Hall	1015 Grey Street	Bala	P0B 1J0	297	2007	13	18,061	0	7,431	534	0	11,475	0.53	0.00	11.47	12.01
5	Foots Bay Community Centre	Community Centre	1006A Buckeye Road	Foots Bay	P0B 1J0	520	1979	41	33,751	0	0	997	0	0	1.00	0.00	0.00	1.00
6	Foots Bay Fire Hall	Fire Hall	1006 Buckeye Road	Foots Bay	P0B 1J0	250	1978	42	21,959	0	0	649	0	0	0.65	0.00	0.00	0.65
7	Glen Orchard Community Centre	Community Centre	3951 MR 169 Unit 3	Glen Orchard	P0B 1J0	279	1964	56	6,292	1,562	2,326	186	4,313	3,593	0.19	4.31	3.59	8.09
8	Glen Orchard Fire Hall	Fire Hall	3951 MR 169	Glen Orchard	P0B 1J0	197	1991	29	46,382	0	3,319	1,370	0	5,125	1.37	0.00	5.13	6.50
9	Glen Orchard Public Works Yard	Public Works Yard	3951 MR 169	Glen Orchard	P0B 1J0	408	1991	29	38,572	0	15,187	1,140	0	23,454	1.14	0.00	23.45	24.59
10	Hekkla Community Centre	Community Centre	1448 Hekkla Road	Rosseau	P0B 1J0	149	1930	90	2,610	1,534	0	77	4,237	0	0.08	4.24	0.00	4.31
11	Milford Bay Community Centre	Community Centre	1020 Beaumaris Road	Milford Bay	P0B 1J0	1,026	1979	41	23,220	11,640	1,897	686	32,150	2,930	0.69	32.15	2.93	35.77
12	Milford Bay Fire Hall	Fire Hall	1229 Milford Bay Road	Milford Bay	P0B 1J0	235	1976	44	13,354	2,127	0	395	5,874	0	0.39	5.87	0.00	6.27
13	Patterson Public Works Yard	Public Works Yard	1078 Raymond Road	Utterson	P0B 1J0	307	1977	43	45,086	0	11,429	1,332	0	17,649	1.33	0.00	17.65	18.98
14	Peninsula Recreation Centre	Recreation Centre	1131 Juddhaven Road	Minett	P0B 1J0	805	1986	34	67,963	2,513	0	2,008	6,942	0	2.01	6.94	0.00	8.95
15	Port Carling Arena	Arena	3 Bailey Street	Port Carling	P0B 1J0	2,580	1973	47	316,476	0	14,246	9,351	0	21,999	9.35	0.00	22.00	31.35
16	Port Carling Community Centre	Community Centre	3A Bailey Street	Port Carling	P0B 1J0	818	2000	20	69,160	0	14,246	2,044	0	21,999	2.04	0.00	22.00	24.04
17	Port Carling Fire Hall	Fire Hall	1 Lee Valley Drive	Port Carling	P0B 1J0	566	2007	13	26,028	0	8,356	769	0	12,903	0.77	0.00	12.90	13.67
18	Port Carling Library	Public Library	69 Joseph St. Port Carling	Port Carling	P0B 1J0	697	2000	20	71,896	0	18,142	2,124	0	28,016	2.12	0.00	28.02	30.14
19	Ranwood Public Works Yard	Public Works Yard	1050 Ranwood Road	Milford Bay	P0B 1J0	453	1977	43	46,368	0	25,793	1,370	0	39,832	1.37	0.00	39.83	41.20
20	Raymond Community Centre	Community Centre	2013 Hwy 141	Utterson	P0B 1J0	474	1983	37	18,341	3,219	3,088	542	8,891	4,768	0.54	8.89	4.77	14.20
21	Raymond Fire Hall	Fire Hall	1002 Spring Street	Utterson	P0B 1J0	158	1981	39	3,841	0	3,752	113	0	5,794	0.11	0.00	5.79	5.91
22	Torrance Community Centre	Community Centre	1030 Torrance Road	Torrance	P0B 1J0	557	1997	23	18,892	2,213	203	558	6,113	314	0.56	6.11	0.31	6.98
23	Torrance Fire Hall	Fire Hall	1030 Torrance Road	Torrance	P0B 1J0	720	1985	35	11,245	0	5,377	332	0	8,304	0.33	0.00	8.30	8.64
24	Ullswater Community Hall	Community Centre	1503 Old Parry Sound Road	Ullswater	P0B 1J0	330	1975	45	5,908	0	2,986	175	0	4,611	0.17	0.00	4.61	4.79
25	Visitors Centre	Administration	3181 Muskoka Road 169	Bala	P0B 1J0	144	< 2009	10 +	4,588	0	937	136	0	1,446	0.14	0.00	1.45	1.58
26	Walkers Point Community Centre	Community Centre	1074 Walker's Point Road	Torrance	P0B 1J0	474	1978	42	64,707	0	0	1,912	0	0	1.91	0.00	0.00	1.91
27	Walkers Point Fire Hall	Fire Hall	1074 Walker's Point Road	Torrance	P0B 1J0	284	2008	12	1,072	0	6,414	32	0	9,904	0.03	0.00	9.90	9.94
28	Windermere Community Centre	Community Centre	2416 Windermere Road	Windermere	P0B 1J0	323	1912	108	33,371	0	0	986	0	0	0.99	0.00	0.00	0.99
29	Windermere Fire Hall	Fire Hall	2201 Windermere Road	Windermere	P0B 1J0	314	1995	25	5,918	0	6,170	175	0	9,528	0.17	0.00	9.53	9.70
30	Windermere Village Hall	Community Centre	2496 Windermere Road	Windermere	P0B 1J0	111	1953	67	604	1,136	0	18	3,139	0	0.02	3.14	0.00	3.16

Conservation and Demand Management Plan
Building Information, Energy and GHG Inventory 2018-2023

Year: **2021**

Facility Description									Fuel and Energy Consumption			Energy Related GHG Emissions (kg CO_2e)			Energy Related GHG Emissions (tCO_2e)			Results
No.	Facility Name	Operation Type	Address	Community	Postal Code	Total Floor Area (m^2)	Year Built	Age	Electricity (kWh)	Fuel Oil 1 & 2 (L)	Propane (L)	Electricity GHG Emissions	Fuel Oil 1 & 2 GHG Emissions	Propane GHG Emissions	Electricity GHG Emissions	Fuel Oil 1 & 2 GHG Emissions	Propane GHG Emissions	Total GHG Emissions (tCO2e)
1	Administration Building	Administration	1 Bailey Street	Port Carling	P0B 1J0	1,628	1973	48	195,420	0	30,419	5,774	0	46,976	5.77	0.00	46.98	52.75
2	Bala Arena	Arena	1009 Maple Avenue	Bala	P0B 1J0	2,199	1973	48	86,947	3,882	5,880	2,569	10,721	9,080	2.57	10.72	9.08	22.37
3	Bala Community Centre	Community Centre	1008 Maple Avenue	Bala	P0B 1J0	494	1953	68	17,155	5,410	0	507	14,942	0	0.51	14.94	0.00	15.45
4	Bala Fire Hall	Fire Hall	1015 Grey Street	Bala	P0B 1J0	297	2007	14	13,886	0	3,579	410	0	5,527	0.41	0.00	5.53	5.94
5	Foots Bay Community Centre	Community Centre	1006A Buckeye Road	Foots Bay	P0B 1J0	520	1979	42	27,094	0	0	801	0	0	0.80	0.00	0.00	0.80
6	Foots Bay Fire Hall	Fire Hall	1006 Buckeye Road	Foots Bay	P0B 1J0	250	1978	43	17,614	0	0	520	0	0	0.52	0.00	0.00	0.52
7	Glen Orchard Community Centre	Community Centre	3951 MR 169 Unit 3	Glen Orchard	P0B 1J0	279	1964	57	10,003	0	3,194	296	0	4,933	0.30	0.00	4.93	5.23
8	Glen Orchard Fire Hall	Fire Hall	3951 MR 169	Glen Orchard	P0B 1J0	197	1991	30	43,183	0	0	1,276	0	0	1.28	0.00	0.00	1.28
9	Glen Orchard Public Works Yard	Public Works Yard	3951 MR 169	Glen Orchard	P0B 1J0	408	1991	30	27,804	0	0	822	0	0	0.82	0.00	0.00	0.82
10	Hekkla Community Centre	Community Centre	1448 Hekkla Road	Rosseau	P0B 1J0	149	1930	91	2,753	1,408	0	81	3,888	0	0.08	3.89	0.00	3.97
11	Milford Bay Community Centre	Community Centre	1020 Beaumaris Road	Milford Bay	P0B 1J0	1,026	1979	42	12,411	11,405	2,731	367	31,499	4,217	0.37	31.50	4.22	36.08
12	Milford Bay Fire Hall	Fire Hall	1229 Milford Bay Road	Milford Bay	P0B 1J0	235	1976	45	13,479	2,674	0	398	7,386	0	0.40	7.39	0.00	7.78
13	Patterson Public Works Yard	Public Works Yard	1078 Raymond Road	Utterson	P0B 1J0	307	1977	44	41,563	0	8,599	1,228	0	13,280	1.23	0.00	13.28	14.51
14	Peninsula Recreation Centre	Recreation Centre	1131 Juddhaven Road	Minett	P0B 1J0	805	1986	35	56,211	2,545	0	1,661	7,028	0	1.66	7.03	0.00	8.69
15	Port Carling Arena	Arena	3 Bailey Street	Port Carling	P0B 1J0	2,580	1973	48	377,496	0	15,209	11,154	0	23,487	11.15	0.00	23.49	34.64
16	Port Carling Community Centre	Community Centre	3A Bailey Street	Port Carling	P0B 1J0	818	2000	21	66,194	0	15,209	1,956	0	23,487	1.96	0.00	23.49	25.44
17	Port Carling Fire Hall	Fire Hall	1 Lee Valley Drive	Port Carling	P0B 1J0	566	2007	14	37,063	0	7,941	1,095	0	12,264	1.10	0.00	12.26	13.36
18	Port Carling Library	Public Library	69 Joseph St. Port Carling	Port Carling	P0B 1J0	697	2000	21	61,921	0	7,715	1,830	0	11,914	1.83	0.00	11.91	13.74
19	Ranwood Public Works Yard	Public Works Yard	1050 Ranwood Road	Milford Bay	P0B 1J0	453	1977	44	36,258	0	22,092	1,071	0	34,116	1.07	0.00	34.12	35.19
20	Raymond Community Centre	Community Centre	2013 Hwy 141	Utterson	P0B 1J0	474	1983	38	29,735	1,439	1,457	879	3,973	2,250	0.88	3.97	2.25	7.10
21	Raymond Fire Hall	Fire Hall	1002 Spring Street	Utterson	P0B 1J0	158	1981	40	3,880	0	1,957	115	0	3,022	0.11	0.00	3.02	3.14
22	Torrance Community Centre	Community Centre	1030 Torrance Road	Torrance	P0B 1J0	557	1997	24	15,118	1,801	317	447	4,974	489	0.45	4.97	0.49	5.91
23	Torrance Fire Hall	Fire Hall	1030 Torrance Road	Torrance	P0B 1J0	720	1985	36	3,435	0	1,710	101	0	2,641	0.10	0.00	2.64	2.74
24	Ullswater Community Hall	Community Centre	1503 Old Parry Sound Road	Ullswater	P0B 1J0	330	1975	46	5,133	0	2,556	152	0	3,948	0.15	0.00	3.95	4.10
25	Visitors Centre	Administration	3181 Muskoka Road 169	Bala	P0B 1J0	144	< 2009	10 +	6,389	0	1,158	189	0	1,788	0.19	0.00	1.79	1.98
26	Walkers Point Community Centre	Community Centre	1074 Walker's Point Road	Torrance	P0B 1J0	474	1978	43	44,400	0	0	1,312	0	0	1.31	0.00	0.00	1.31
27	Walkers Point Fire Hall	Fire Hall	1074 Walker's Point Road	Torrance	P0B 1J0	284	2008	13	1,064	0	4,080	31	0	6,301	0.03	0.00	6.30	6.33
28	Windermere Community Centre	Community Centre	2416 Windermere Road	Windermere	P0B 1J0	323	1912	109	25,729	0	0	760	0	0	0.76	0.00	0.00	0.76
29	Windermere Fire Hall	Fire Hall	2201 Windermere Road	Windermere	P0B 1J0	314	1995	26	7,479	0	4,147	221	0	6,404	0.22	0.00	6.40	6.63
30	Windermere Village Hall	Community Centre	2496 Windermere Road	Windermere	P0B 1J0	111	1953	68	25,729	1,086	0	760	2,999	0	0.76	3.00	0.00	3.76

Conservation and Demand Management Plan
Building Information, Energy and GHG Inventory 2018-2023

Year: **2022**

Building Information									Fuel and Energy Consumption			Energy Related GHG Emissions (kg CO_2e)			Energy Related GHG Emissions (tCO_2e)			Results
No.	Facility Name	Operation Type	Address	Community	Postal Code	Total Floor Area (m^2)	Year Built	Age	Electricity (kWh)	Fuel Oil 1 & 2 (L)	Propane (L)	Electricity GHG Emissions	Fuel Oil 1 & 2 GHG Emissions	Propane GHG Emissions	Electricity GHG Emissions	Fuel Oil 1 & 2 GHG Emissions	Propane GHG Emissions	Total GHG Emissions (tCO2e)
1	Administration Building	Administration	1 Bailey Street	Port Carling	P0B 1J0	1,628	1973	49	201,540	0	29,665	5,955	0	45,811	5.96	0.00	45.81	51.77
2	Bala Arena	Arena	1009 Maple Avenue	Bala	P0B 1J0	2,199	1973	49	192,493	0	8,064	5,688	0	12,454	5.69	0.00	12.45	18.14
3	Bala Community Centre	Community Centre	1008 Maple Avenue	Bala	P0B 1J0	494	1953	69	20,770	10,139	0	614	28,004	0	0.61	28.00	0.00	28.62
4	Bala Fire Hall	Fire Hall	1015 Grey Street	Bala	P0B 1J0	297	2007	15	17,834	0	5,481	527	0	8,465	0.53	0.00	8.46	8.99
5	Foots Bay Community Centre	Community Centre	1006A Buckeye Road	Foots Bay	P0B 1J0	520	1979	43	29,860	0	0	882	0	0	0.88	0.00	0.00	0.88
6	Foots Bay Fire Hall	Fire Hall	1006 Buckeye Road	Foots Bay	P0B 1J0	250	1978	44	22,236	0	0	657	0	0	0.66	0.00	0.00	0.66
7	Glen Orchard Community Centre	Community Centre	3951 MR 169 Unit 3	Glen Orchard	P0B 1J0	279	1964	58	9,085	0	3,380	268	0	5,220	0.27	0.00	5.22	5.49
8	Glen Orchard Fire Hall	Fire Hall	3951 MR 169	Glen Orchard	P0B 1J0	197	1991	31	34,726	0	0	1,026	0	0	1.03	0.00	0.00	1.03
9	Glen Orchard Public Works Yard	Public Works Yard	3951 MR 169	Glen Orchard	P0B 1J0	408	1991	31	17,590	0	15,525	520	0	23,975	0.52	0.00	23.97	24.49
10	Hekkla Community Centre	Community Centre	1448 Hekkla Road	Rosseau	P0B 1J0	149	1930	92	3,033	2,044	0	90	5,646	0	0.09	5.65	0.00	5.74
11	Milford Bay Community Centre	Community Centre	1020 Beaumaris Road	Milford Bay	P0B 1J0	1,026	1979	43	30,247	12,035	2,543	894	33,241	3,927	0.89	33.24	3.93	38.06
12	Milford Bay Fire Hall	Fire Hall	1229 Milford Bay Road	Milford Bay	P0B 1J0	235	1976	46	15,416	2,613	0	456	7,217	0	0.46	7.22	0.00	7.67
13	Patterson Public Works Yard	Public Works Yard	1078 Raymond Road	Utterson	P0B 1J0	307	1977	45	45,391	0	12,358	1,341	0	19,085	1.34	0.00	19.08	20.43
14	Peninsula Recreation Centre	Recreation Centre	1131 Juddhaven Road	Minett	P0B 1J0	805	1986	36	59,495	3,969	0	1,758	10,963	0	1.76	10.96	0.00	12.72
15	Port Carling Arena	Arena	3 Bailey Street	Port Carling	P0B 1J0	2,580	1973	49	416,501	0	14,832	12,307	0	22,905	12.31	0.00	22.91	35.21
16	Port Carling Community Centre	Community Centre	3A Bailey Street	Port Carling	P0B 1J0	818	2000	22	72,244	0	14,832	2,135	0	22,905	2.13	0.00	22.91	25.04
17	Port Carling Fire Hall	Fire Hall	1 Lee Valley Drive	Port Carling	P0B 1J0	566	2007	15	37,107	0	12,139	1,096	0	18,746	1.10	0.00	18.75	19.84
18	Port Carling Library	Public Library	69 Joseph St. Port Carling	Port Carling	P0B 1J0	697	2000	22	73,739	0	17,848	2,179	0	27,563	2.18	0.00	27.56	29.74
19	Ranwood Public Works Yard	Public Works Yard	1050 Ranwood Road	Milford Bay	P0B 1J0	453	1977	45	43,802	0	29,530	1,294	0	45,604	1.29	0.00	45.60	46.90
20	Raymond Community Centre	Community Centre	2013 Hwy 141	Utterson	P0B 1J0	474	1983	39	22,714	74,429	7,523	671	205,569	11,618	0.67	205.57	11.62	217.86
21	Raymond Fire Hall	Fire Hall	1002 Spring Street	Utterson	P0B 1J0	158	1981	41	4,218	0	3,865	125	0	5,969	0.12	0.00	5.97	6.09
22	Torrance Community Centre	Community Centre	1030 Torrance Road	Torrance	P0B 1J0	557	1997	25	17,713	3,660	235	523	10,110	362	0.52	10.11	0.36	11.00
23	Torrance Fire Hall	Fire Hall	1030 Torrance Road	Torrance	P0B 1J0	720	1985	37	1,897	0	5,365	56	0	8,285	0.06	0.00	8.28	8.34
24	Ullswater Community Hall	Community Centre	1503 Old Parry Sound Road	Ullswater	P0B 1J0	330	1975	47	6,210	0	2,828	183	0	4,367	0.18	0.00	4.37	4.55
25	Visitors Centre	Administration	3181 Muskoka Road 169	Bala	P0B 1J0	144	< 2009	10 +	0	0	1,963	0	0	3,032	0.00	0.00	3.03	3.03
26	Walkers Point Community Centre	Community Centre	1074 Walker's Point Road	Torrance	P0B 1J0	474	1978	44	64,480	0	0	1,905	0	0	1.91	0.00	0.00	1.91
27	Walkers Point Fire Hall	Fire Hall	1074 Walker's Point Road	Torrance	P0B 1J0	284	2008	14	937	0	6,508	28	0	10,051	0.03	0.00	10.05	10.08
28	Windermere Community Centre	Community Centre	2416 Windermere Road	Windermere	P0B 1J0	323	1912	110	29,299	0	0	866	0	0	0.87	0.00	0.00	0.87
29	Windermere Fire Hall	Fire Hall	2201 Windermere Road	Windermere	P0B 1J0	314	1995	27	7,415	0	6,029	219	0	9,310	0.22	0.00	9.31	9.53
30	Windermere Village Hall	Community Centre	2496 Windermere Road	Windermere	P0B 1J0	111	1953	69	29,299	1,360	0	866	3,755	0	0.87	3.76	0.00	4.62

Conservation and Demand Management Plan
Building Information, Energy and GHG Inventory 2018-2023

Year: **2023**

Building Information									Fuel and Energy Consumption			Energy Related GHG Emissions (kg CO_2e)			Energy Related GHG Emissions (tCO_2e)			Results
No.	Facility Name	Operation Type	Address	Community	Postal Code	Total Floor Area (m^2)	Year Built	Age	Electricity (kWh)	Fuel Oil 1 & 2 (L)	Propane (L)	Electricity GHG Emissions	Fuel Oil 1 & 2 GHG Emissions	Propane GHG Emissions	Electricity GHG Emissions	Fuel Oil 1 & 2 GHG Emissions	Propane GHG Emissions	Total GHG Emissions (tCO2e)
1	Administration Building	Administration	1 Bailey Street	Port Carling	P0B 1J0	1,628	1973	50	181,800	0	26,424	5,372	0	40,807	5.37	0.00	40.81	46.18
2	Bala Arena	Arena	1009 Maple Avenue	Bala	P0B 1J0	2,199	1973	50	235,682	0	10,450	6,964	0	16,138	6.96	0.00	16.14	23.10
3	Bala Community Centre	Community Centre	1008 Maple Avenue	Bala	P0B 1J0	494	1953	70	21,716	5,497	0	642	15,182	0	0.64	15.18	0.00	15.82
4	Bala Fire Hall	Fire Hall	1015 Grey Street	Bala	P0B 1J0	297	2007	16	15,428	0	6,217	456	0	9,601	0.46	0.00	9.60	10.06
5	Foots Bay Community Centre	Community Centre	1006A Buckeye Road	Foots Bay	P0B 1J0	520	1979	44	29,860	0	0	882	0	0	0.88	0.00	0.00	0.88
6	Foots Bay Fire Hall	Fire Hall	1006 Buckeye Road	Foots Bay	P0B 1J0	250	1978	45	19,438	0	0	574	0	0	0.57	0.00	0.00	0.57
7	Glen Orchard Community Centre	Community Centre	3951 MR 169 Unit 3	Glen Orchard	P0B 1J0	279	1964	59	23,901	0	3,573	706	0	5,518	0.71	0.00	5.52	6.22
8	Glen Orchard Fire Hall	Fire Hall	3951 MR 169	Glen Orchard	P0B 1J0	197	1991	32	49,147	0	0	1,452	0	0	1.45	0.00	0.00	1.45
9	Glen Orchard Public Works Yard	Public Works Yard	3951 MR 169	Glen Orchard	P0B 1J0	408	1991	32	32,028	0	15,308	946	0	23,639	0.95	0.00	23.64	24.59
10	Hekkla Community Centre	Community Centre	1448 Hekkla Road	Rosseau	P0B 1J0	149	1930	93	2,929	1,115	0	87	3,079	0	0.09	3.08	0.00	3.17
11	Milford Bay Community Centre	Community Centre	1020 Beaumaris Road	Milford Bay	P0B 1J0	1,026	1979	44	27,868	10,399	3,113	823	28,720	4,808	0.82	28.72	4.81	34.35
12	Milford Bay Fire Hall	Fire Hall	1229 Milford Bay Road	Milford Bay	P0B 1J0	235	1976	47	14,729	2,925	0	435	8,080	0	0.44	8.08	0.00	8.51
13	Patterson Public Works Yard	Public Works Yard	1078 Raymond Road	Utterson	P0B 1J0	307	1977	46	37,144	0	16,037	1,098	0	24,765	1.10	0.00	24.77	25.86
14	Peninsula Recreation Centre	Recreation Centre	1131 Juddhaven Road	Minett	P0B 1J0	805	1986	37	57,543	2,749	0	1,700	7,591	0	1.70	7.59	0.00	9.29
15	Port Carling Arena	Arena	3 Bailey Street	Port Carling	P0B 1J0	2,580	1973	50	442,725	0	13,212	13,082	0	20,404	13.08	0.00	20.40	33.49
16	Port Carling Community Centre	Community Centre	3A Bailey Street	Port Carling	P0B 1J0	818	2000	23	64,921	0	13,212	1,918	0	20,404	1.92	0.00	20.40	22.32
17	Port Carling Fire Hall	Fire Hall	1 Lee Valley Drive	Port Carling	P0B 1J0	566	2007	16	37,574	0	9,039	1,110	0	13,959	1.11	0.00	13.96	15.07
18	Port Carling Library	Public Library	69 Joseph St. Port Carling	Port Carling	P0B 1J0	697	2000	23	66,189	0	17,953	1,956	0	27,724	1.96	0.00	27.72	29.68
19	Ranwood Public Works Yard	Public Works Yard	1050 Ranwood Road	Milford Bay	P0B 1J0	453	1977	46	43,803	0	23,776	1,294	0	36,718	1.29	0.00	36.72	38.01
20	Raymond Community Centre	Community Centre	2013 Hwy 141	Utterson	P0B 1J0	474	1983	40	24,360	73,301	5,304	720	202,453	8,192	0.72	202.45	8.19	211.36
21	Raymond Fire Hall	Fire Hall	1002 Spring Street	Utterson	P0B 1J0	158	1981	42	3,912	0	4,002	116	0	6,180	0.12	0.00	6.18	6.30
22	Torrance Community Centre	Community Centre	1030 Torrance Road	Torrance	P0B 1J0	557	1997	26	17,467	2,222	201	516	6,138	310	0.52	6.14	0.31	6.96
23	Torrance Fire Hall	Fire Hall	1030 Torrance Road	Torrance	P0B 1J0	720	1985	38	909	0	3,963	27	0	6,119	0.03	0.00	6.12	6.15
24	Ullswater Community Hall	Community Centre	1503 Old Parry Sound Road	Ullswater	P0B 1J0	330	1975	48	7,222	0	3,425	213	0	5,289	0.21	0.00	5.29	5.50
25	Visitors Centre	Administration	3181 Muskoka Road 169	Bala	P0B 1J0	144	< 2009	10 +	0	0	1,396	0	0	2,156	0.00	0.00	2.16	2.16
26	Walkers Point Community Centre	Community Centre	1074 Walker's Point Road	Torrance	P0B 1J0	474	1978	45	58,160	0	0	1,719	0	0	1.72	0.00	0.00	1.72
27	Walkers Point Fire Hall	Fire Hall	1074 Walker's Point Road	Torrance	P0B 1J0	284	2008	15	952	0	5,946	28	0	9,182	0.03	0.00	9.18	9.21
28	Windermere Community Centre	Community Centre	2416 Windermere Road	Windermere	P0B 1J0	323	1912	111	27,172	0	0	803	0	0	0.80	0.00	0.00	0.80
29	Windermere Fire Hall	Fire Hall	2201 Windermere Road	Windermere	P0B 1J0	314	1995	28	6,822	0	6,876	202	0	10,619	0.20	0.00	10.62	10.82
30	Windermere Village Hall	Community Centre	2496 Windermere Road	Windermere	P0B 1J0	111	1953	70	27,172	1,265	0	803	3,493	0	0.80	3.49	0.00	4.30

Appendix B:
CDM Plan Update Requirement

Appendix A: CDM plan update requirements

Subsection 25.35.2(3) of the *Electricity Act, 1998* and section 5 of O. Reg 25/23 sets out the requirements for the CDM and future plan updates, which includes the following information:

- A summary of your organization's annual energy consumption and GHG emissions for each of your organization's operations prescribed under the Regulation.
    - This summary is only required to include information from the year that ends on December 31 immediately preceding the day the summary is required to be submitted.
    - This summary can be the annual energy report your organization submitted to the Ministry of Energy to fulfill its obligations under O. Reg. 25/23.
- A description and a forecast of the expected results of current and proposed activities and measures to conserve the energy consumed by your organization's prescribed operations and to otherwise reduce the amount of energy consumed by your organization, including by employing such energy conservation and demand management methods as may be prescribed by Regulation.
- A summary of the progress and achievements in energy conservation and other reductions since the previous plan.
- A description of the results of previous activities and measures to conserve the energy consumed by your organization's prescribed operations and to otherwise reduce the amount of energy consumed by your organization, including by employing such energy conservation and demand management methods as may be prescribed by the Regulation.
- A forecast of the expected results of the current and proposed measures.
- Cost and saving estimates for your organization's current and proposed activities and measures.
- The estimated length of time the public agency's current and proposed activities and measures referred to in paragraph 2 of subsection 25.35.2(3) of the *Electricity Act, 1998* will be in place.
- A description of any proposed changes to be made to assist your organization in reaching any targets it has established or forecasts it has made.
- The actual results of your organization's previous energy conservation efforts and activities.
- A description of any renewable energy generation facility operated by your organization and the amount of energy produced on an annual basis by the facility.
- A description of:
    - The ground source energy utilized, if any, by ground source heat pump technology operated by the public agency.

    - The solar energy utilized, if any, by thermal air technology or thermal water technology operated by the public agency.
    - The proposed plan, if any, to operate heat pump technology, thermal air technology or thermal water technology in the future.
- Confirmation that the energy conservation and demand management plan has been approved by the public agency's senior management.

O. Reg. 25/23 requires the CDM plan to be made publicly available by:

- Publishing it on your organization's website (if there is one);
- Making it available to the public in printed form at the head office.

CDM plan updates need to be published on or before July 1, 2024, and on or before every fifth anniversary thereafter.