Energy Conservation & Demand Management Plan 2024-2029

Township of Oro-Medonte

Prepared by: BLUE SKY Energy Engineering & Consulting Inc. with AMO/LAS

Township of Oro-Medonte
Proud Heritage, Exciting Future

Dear Community Members,

The Township of Oro-Medonte Council is steadfast in its commitment to energy conservation and environmental sustainability. We recognize the importance of reducing our environmental footprint and are dedicated to promoting responsible energy use and climate conscious practices within our community.

As part of our broader Climate Action Plan, our efforts are focused on enhancing energy efficiency, exploring renewable energy options, and fostering a culture of accountability and sustainability. We believe that by working together, we can create a more resilient environment for future generations. We will look to accomplish this by the following initiatives:

1. **Reducing Greenhouse Gas Emissions**: Setting targets to lower emissions from various sectors such as transportation, industry, and agriculture, both as a municipality and a community.
2. **Increasing Renewable Energy Use**: Exploring and promoting the adoption of renewable energy sources like solar and wind power.
3. **Enhancing Energy Efficiency**: Implementing measures to improve energy efficiency in buildings, transportation, and infrastructure.
4. **Building Climate Resilience**: Developing strategies to adapt to and mitigate the impacts of climate change, such as extreme weather events and rising sea levels.
5. **Promoting Sustainable Transportation**: Encouraging the use of public transportation, cycling, and walking, and exploring the transition to electric vehicles.
6. **Protecting Natural Resources**: Conserving forests, wetlands, and other natural areas that act as carbon sinks to help mitigate climate change.
7. **Engaging the Community**: Raising awareness and involving residents, businesses, and organizations in energy conservation and climate action efforts.
8. **Monitoring and Reporting**: Establishing systems to track progress and report on the effectiveness of environmental initiatives.

We encourage all community members to actively participate in our environmental and energy conservation efforts. Your involvement is crucial to our success and to the well-being of our planet.

Thank you for your continued support and commitment to making our community a leader in environmental stewardship.

Sincerely,

Mayor Randy Greenlaw & Members of Council

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1. Introduction

1.1 Background

Municipal Energy Management depends on the successful integration of energy-efficient practices into the operations and culture of the organization. It includes the ongoing assessment of energy use performance and requires the implementation of measures that will help reduce energy waste and increase efficiency.

Ontario Regulation 25/23 (Broader Public Sector: Energy Reporting and Conservation and Demand Management Plans) requires broader public sector organizations, including municipalities, to develop a Conservation and Demand Management Plan (CDM Plan) and update it every five years.

In 2014, the Township of Oro-Medonte (the Township) adopted its first CDM Plan. This report presents the updated CDM Plan covering the period from 2024 to 2029, (referencing energy data compiled up until the end of 2023). It has been developed to provide energy conservation guidance to assist the Township in achieving reductions in overall energy use and GHG emissions. The measures cover current Township operations along with future planning for energy efficient capital projects.

The CDM plan builds on previous conservation work completed by the Township and includes the following key elements:

- → Oro-Medonte's conservation successes.
- → The energy baseline, recent and historical energy performance and current GHG emissions.
- → Corporate goals, objectives and strategic priorities for managing energy use.
- → A specific, actionable and prioritized inventory of energy conservation and demand management measures planned over the next five years to support the 2029 conservation goals.
- → A commitment from the Township's senior management.

This plan has been developed to formalize and consolidate the Township's energy management efforts and will be revisited and updated every five years, as required

under the regulation.

Energy management and conservation is a township priority which highlights the need for better equipment maintenance, high efficiency design and operation, and cost-effective planning to see an overall reduction in costs. Responsible energy management promotes green development and sets a good example for the community.

1.2 Overview of Township Facilities Included in the Plan

Ontario Regulation 25/23 states that energy use and greenhouse gas emissions must be reported for buildings or facilities the Township owns or leases that:

> "(a) are heated or cooled and the public agency is issued the invoices and is responsible for making the payments for the building or facility's energy consumption; or
>
> (b) are related to the treatment of water of sewage, whether the building or facility is heated or cooled, and the public agency is issued the invoices and is responsible for making the payments for the building or facility's energy consumption."
>
> (O.Reg. 25/23 s. 6)

The Township of Oro-Medonte has forty (40) primary facilities that are required under O.Reg. 25/23 to report energy use annually. In addition, there are an extra nineteen (19) accounts that are not covered by the regulation but are included in this plan (parks and pavilions, tennis courts, fire reservoirs) along with numerous streetlighting accounts. For the purpose of this report, the streetlighting accounts will be combined into one set of data for comparison with other facility loads. A summary of facilities by department is described below in Table 1.1 and a facility list can be found in Appendix A.

Table 1.1: Summary Township Facilities & Assets within Boundaries of this Plan

Department	Description	Number of Facilities	Total Area (ft^2)
Recreation	Community Halls, Arenas, Parks	19	57,769
Fire	Fire Halls and Facilities	12	49,021
Municipal Facilities	Administrative Offices	4	26,229
Operations	Works Yards, Sand Storage	4	41,507
Environmental Services	Water and Wastewater Facilities	19	9,601
Environmental Services	Various Locations (streetlighting)	N/A	N/A

1.3 Renewable Energy Sources

The Township has been actively pursuing methods of integrating renewable fuel sources into the facility portfolio.

Air source heat pumps use the outdoor air as a source of thermal energy in heating mode, and as a sink to reject energy when in cooling mode. They replace traditional furnace HVAC units and not only benefit the environment because of the elimination of natural gas but are extremely efficient resulting in low operating costs.

Currently, the Township of Oro-Medonte does not own any renewable power generating assets. However, the Township is home to numerous privately owned large and smaller solar arrays located in the municipality. The Township will continue to evaluate renewable technology for consideration in future upgrade projects.

2. Accomplishments

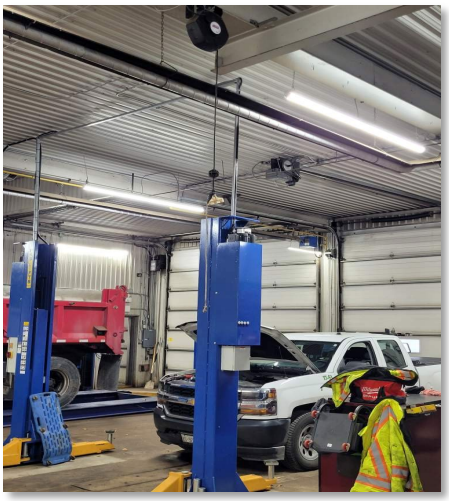
2.1 Successes

The Township has completed several upgrades at numerous facilities to reduce energy consumption and improve efficiency and eliminate waste. The projects include the conversion from burning oil to propane, retrofitting fluorescent lighting to LED, updating windows and doors and installing energy saving equipment, and a partial roof replacement at Eady Community Hall, along with a new roof and insulation upgrades at Carley Community Hall and Hawkestone Community Hall garage to name a few. The Township has also upgraded many indoor and outdoor systems to LED. The following images illustrate several of the delivered energy saving projects.

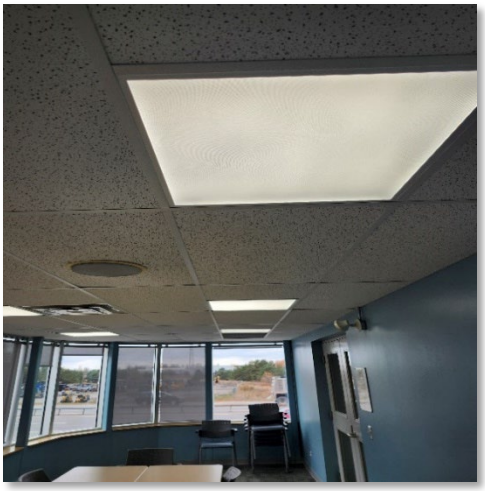
Figure 2.1 Jarratt Hall HVAC Upgrade and Fuel Conversion to Propane

Figure 2.2 South Yard Tankless Water Heater

Town Hall LED Lighting



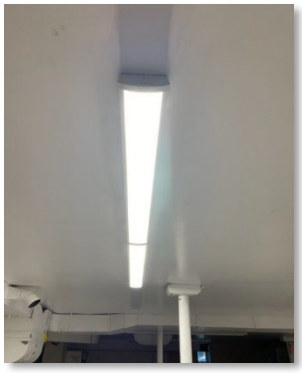
South Yard LED Lighting



Arena LED Lighting Upgrade

Admin Building Outdoor LED Lighting

Vasey Ball Diamond LED Lighting



Jarratt Hall LED Lighting

Figure 2.3 LED Lighting Upgrades

Figure 2.4 Eady Community Hall A/C Unit Upgrade and New Exterior Doors

Figure 2.5 Arena Outdoor LED Lighting, Programmable Thermostats and Dehumidifier Upgrade

Figure 2.6 New Windows at Old Town Hall

Figure 2.7 Pipe Insulation Wrap and Door Sweep

3. Current and Historical Consumption and Emissions

3.1 Energy Baseline

This section provides a picture of energy consumption at the Township over the last decade with detailed breakdowns for the current 2023 results. An energy baseline was established to provide a quantitative reference case for comparing the Township's energy performance. 2013 was selected as the energy baseline year for the Township, to represent the last ten years of energy usage.

Table 3.1 below presents the Township's 2023 energy performance, compared to the baseline year of 2013 and interim year 2019. Streetlighting energy consumption is separated from the facilities' data as it is managed separately. There have been significant improvements in streetlight energy consumption compared to the 2013 baseline resulting from LED retrofits.

Table 3.1 Oro-Medonte Energy Consumption Compared to Baseline

Account Centre	Energy Type	2013	2019	2023 Subset[2]	% Change from 2013
Facilities	Electricity (kWh)	2,298,194	1,707,838	1,794,985	-21.9%
	Natural Gas (m3)	57,236	126,038	124,564	117.6%
	Propane (L)	44,642	31,935	65,366	46.4%
	Fuel Oil (L)	31,999	6,294	3,157	-90.1%
	Subtotal (ekWh)[1]	**3,549,623**	**3,303,827**	**3,579,079**	**0.8%**
Streetlights	Electricity (kWh)	423,320	246,522	251,636	-40.6%
Total Energy	**(ekWh)[1]**	**3,972,943**	**3,550,349**	**3,830,715**	**-3.6%**
GHG Emissions	**(tCO_2e)**	**673.9**	**365.5**	**410.3**	**-39.1%**

Note 1: ekWh (equivalent kWh) is a calculated value using the thermal energy content of Natural Gas, Propane and Fuel Oil to convert consumption to units of "equivalent" kWh (ekWh) for comparison.

Twenty (20) additional facilities that consume electricity were added to the tracking list in 2022 and will continue to be tracked going forward. The 2023 Subset column (shown in Table 3.1 and 3.2) only includes the buildings tracked in 2013 and 2019 to provide

a clean comparison. The column labeled 2023 Additional Facilities (Table 3.2 below) shows the annual consumption for the additional 20 facilities and the 2023 Total column lists energy for all tracked accounts.

Table 3.2 Oro-Medonte Energy Consumption Compared to Baseline

Account Centre	Energy Type	2023 Subset[2]	2023 Additional Facilties	2023 Total
Facilities	Electricity (kWh)	1,794,985	238,440	2,033,425
	Natural Gas (m3)	124,564	n/a	124,564
	Propane (L)	65,366	n/a	65,366
	Fuel Oil (L)	3,157	n/a	3,157
	Subtotal (ekWh)[1]	**3,579,079**	**238,440**	**3,817,519**
Streetlights	Electricity (kWh)	251,636	n/a	251,636
Total Energy	**(ekWh)[1]**	**3,830,715**	**238,440**	**4,069,155**
GHG Emissions	**(tCO_2e)**	**410.3**	**7.2**	**417.5**

In 2023, the Township's facilities consumed 4,069 eMWh of energy which resulted in 418 tonnes of greenhouse gas emissions (tCO_2e). Comparing the subset of facilities in 2023 (3,831 eMWh, 410 tCO_2e) to the same buildings in 2013, the Township has achieved a 3.6% reduction in energy consumption and 39.1% reduction in greenhouse gas emissions (tCO_2e) despite expansion in levels of service and increases in the square footage of facilities. This improvement has been achieved through energy conservation measures, the conversion of streetlighting to LED, and the reduction of fuel oil use.

The drop in carbon emissions was driven by the efforts of Township staff to convert to cleaner fuels and deliver efficiency improvements as well as outside factors. Additionally, the Government of Ontario closed the last of the coal fired electricity

plants in 2014 leading to much cleaner electricity being sold throughout the province.

Figure 3.1 below shows the total energy consumption at the Township by year divided by fuel source (electricity, natural gas, propane and fuel oil). Please note that natural gas, typically measured by consumed volume (m^3) has been converted to equivalent kilowatt hours (ekWh) to combine it with electricity consumption. Similarly, propane and fuel oil have also been converted to ekWh.

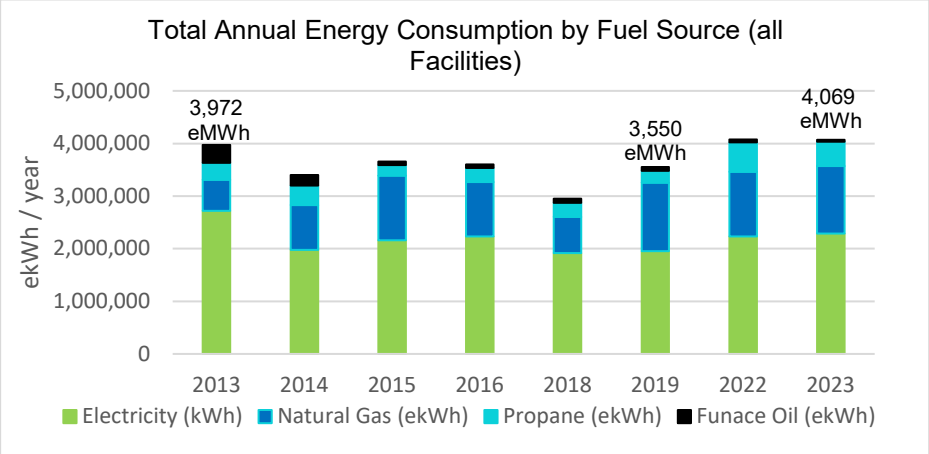


Figure 3.1 Total Energy Consumption and Energy Intensity 2011 – 2023

Data from 2017 and 2020-21 was unavailable and/or incomplete therefore these years on historical graphs have been removed in this report. The reduction in Furnace (Fuel) Oil from 2013 to 2023 can be seen in Figure 3.1, as can the reduction in electricity use.

The following seven facilities utilize over 78% of the total energy consumed in the Township (all fuel types combined). Table 3.3 lists their energy consumption along with the facility energy use intensity.

Table 3.3 Facilities with the Highest Energy Consumption in 2023

Facility	Address	Area (ft^2)	Energy Consumption 2023 (eMWh)	EUI 2023 (ekWh/ft^2)
Community Arena	2188 Hwy 11 S.	42,500	979.3	23.0
Administration Office	148 Line 7 S.	16,800	331.2	19.7
South Operations Yard	833 Line 7 N.	12,465	269.1	21.6
Streetlighting	Various	n/a	251.6	n/a
North Operations Yard	344 County Rd 19	7600	196.3	25.8
Horseshoe Highlands Pumphouse (Well)	1A Country Club Lane	900	195.5	n/a
Horseshoe Highlands Booster Pumping Station	3333 Line 4 N.	2500	177.9	n/a

3.2 Energy Breakdown

Historical energy consumption is broken down further to help illustrate the energy use picture, measure progress, and to assist in identifying opportunities for conservation at the Township. The following sections describe the combined energy use picture, which is then broken down into each utility - electricity, natural gas, propane and fuel oil use.

Total Energy Breakdown:

The combined energy from all facilities and energy types for the Township in 2023, is shown in Figures 3.2 and 3.3 below.

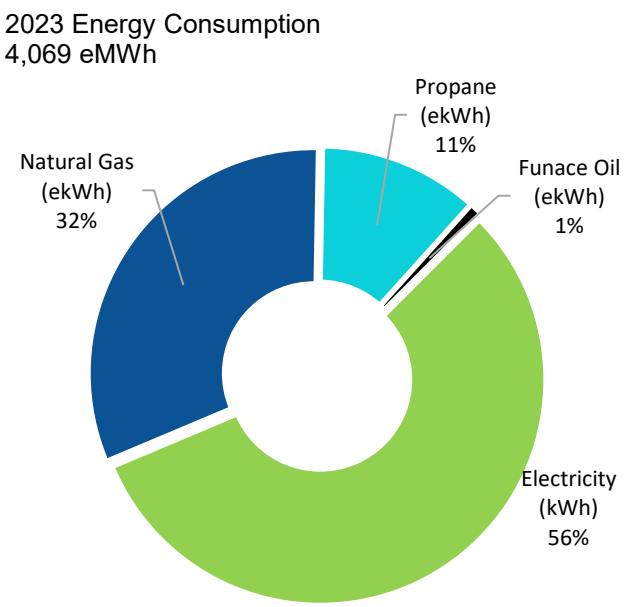


Figure 3.2 2023 Energy Consumption by Fuel Source

The Township consumes three main fuels (electricity, natural gas, propane) with one minor source (fuel oil). To compare different energy sources, the natural gas, propane and fuel oil consumption was converted to equivalent kWh (ekWh) using standard conversion rates. Figure 3.2 illustrates energy consumed by the Township broken down by fuel type for 2023, with electricity being the primary at 56% and natural gas following at 32%.

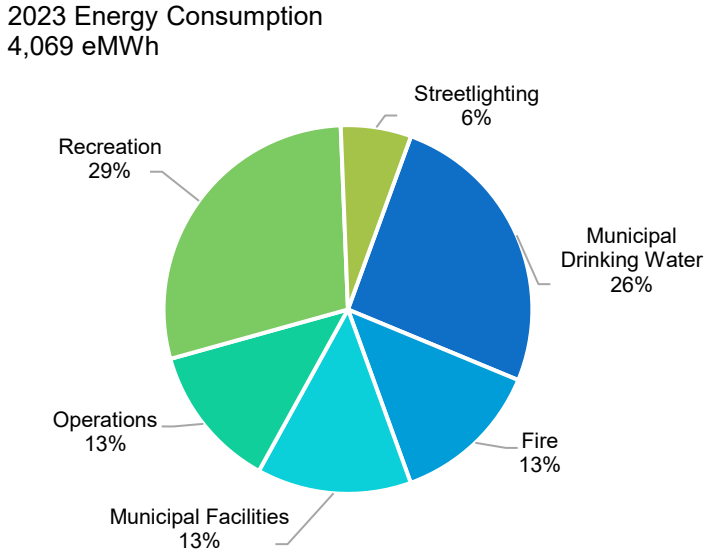


Figure 3.3 2023 Energy Consumption by Department

The energy consumption is broken down by each department in Figure 3.3. Parks and Recreation leads with 29% of the energy consumed in 2023 (primarily from the Arena), followed by the Environmental Services/Municipal Drinking Water (26%), the Fire department (13%) and Municipal Facilities (13%).

Electricity Breakdown:

The following section provides a detailed breakdown of electricity consumption at Township facilities. Figure 3.4 illustrates electricity use by facility in 2023 (graph on left) and historical consumption from 2013 to 2023 (graph on right).

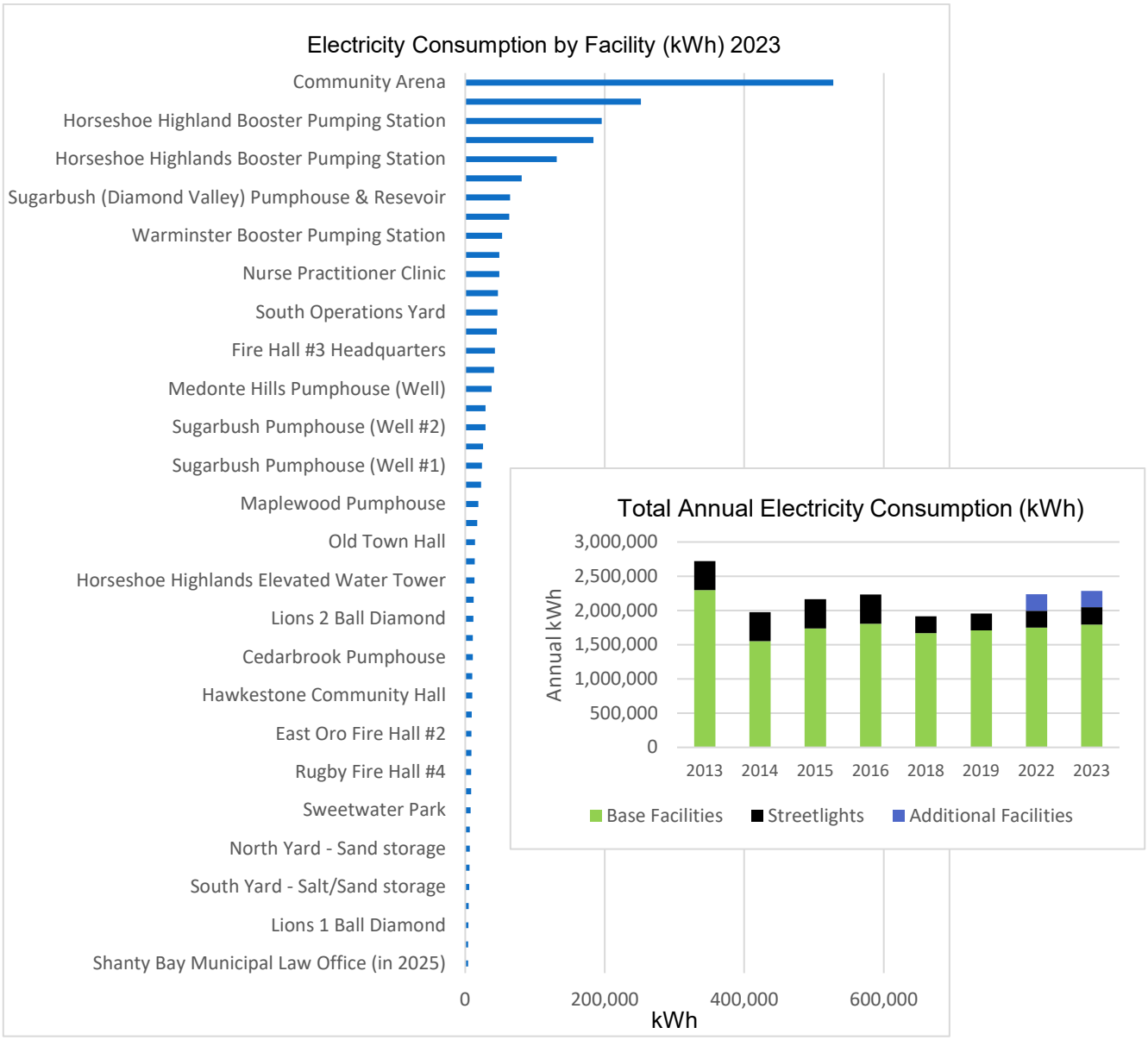


Figure 3.4 Electricity Consumption by Facility and Year

As previously discussed, twenty (20) additional facilities were added to the tracking list in 2022 and 2023. The consumption of these facilities were separated into the right

graph in Figure 3.4 (shown in blue). (Please note 2017, 2020 and 2021 data have been removed from the historical graphs because the data was incomplete.) Reviewing individual facilities, the Oro-Medonte Community Arena is the largest electricity consumer, responsible for 23% of the total Township electricity consumption, followed by Streetlighting, the Horseshoe Highlands Pumphouse (Well)and the Administration Office.

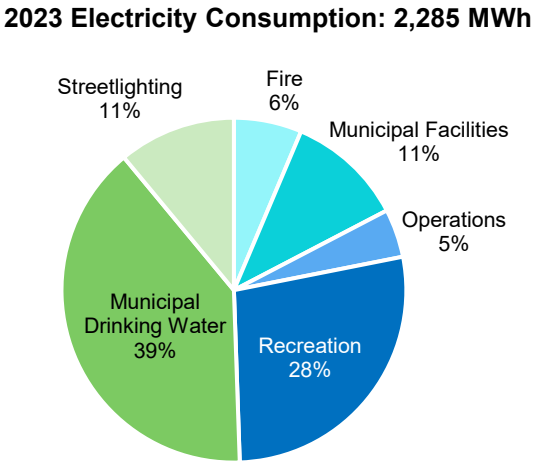


Figure 3.5 2023 Electricity Use by Department

The Municipal Drinking Water function of the Environmental Services department is the largest consumer of electricity (39%) followed by the Recreation division (28%). Streetlighting and the Municipal Facilities are tied for third with 11% each, followed by the Fire department and Operations.

Natural Gas Breakdown:

Figure 3.6 below shows the natural gas consumption in order of greatest use, for 2023 (graph on left) and the graph on the right trends this consumption annually from 2013 to 2023.

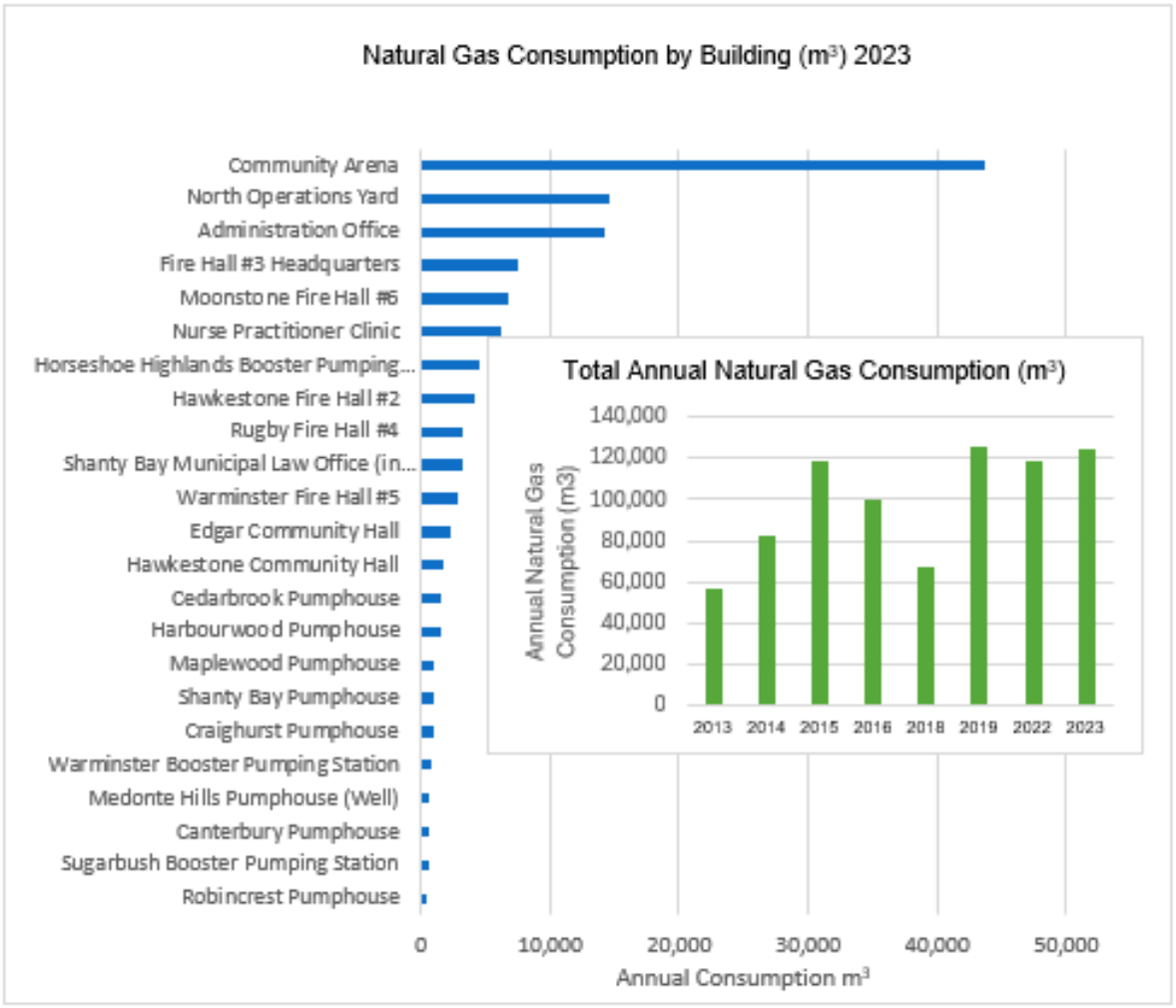


Figure 3.6 Natural Gas Use by Facility and Year

The Community Arena is the largest natural gas consumer, responsible for over 35% of this energy use, followed by the North Operations Yard and Administration Office. As indicated on the graph on the right, natural gas consumption increased in 2014 and 2015. This is likely due in part because several facilities retired their fuel oil systems and switched to natural gas.

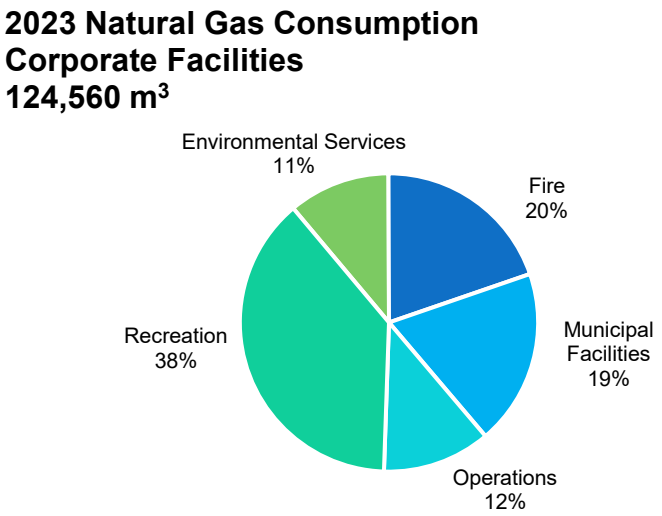


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Figure 3.7 2023 Natural Gas Use by Department

The Parks and Recreation division is the largest consumer of natural gas (38%) followed by the Fire Department (20%), Municipal Facilities (19%), Operations (12%) and Environmental Services (11%).

Propane and Fuel Oil Breakdown:

Figure 3.8 below shows the propane consumption by facility in order of greatest use for 2023. The largest consumer of fuel (furnace) oil is the South Operations Yard.

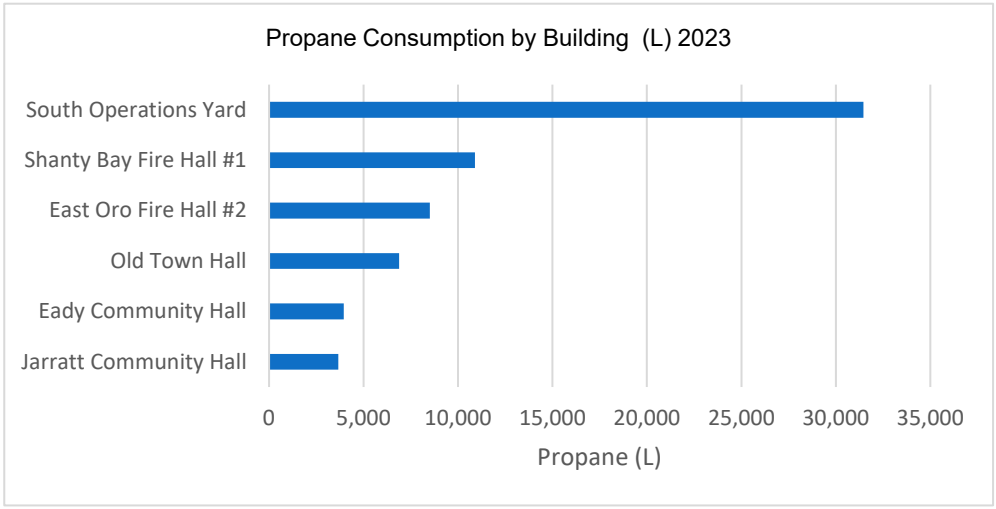

Figure 3.8 2023 Propane Use by Facility

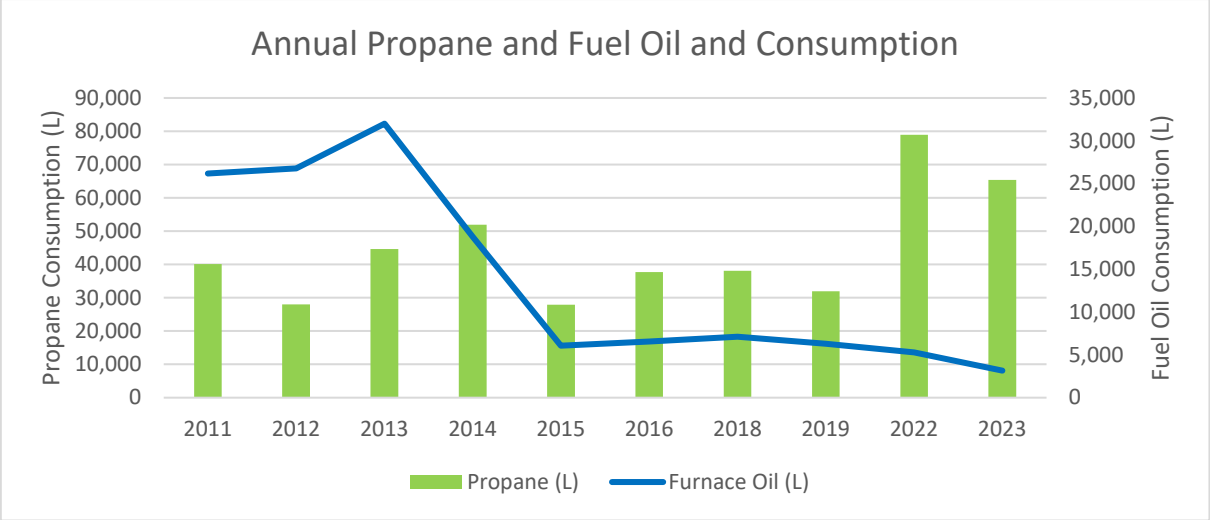

Figure 3.9 Annual Propane and Fuel Oil Consumption

The Township is continuously removing and upgrading heating systems that consume furnace oil. In 2025, only one facility (Carley Hall) used fuel oil which was removed and converted to propane in January. To minimize greenhouse gas emissions, the Township will continue to evaluate methods of reducing all fossil fuels.

Carbon Emissions

The carbon footprint related to energy consumption by the Township is broken down below. The rate of greenhouse gas production varies by energy source and is directly affected by emission conversion factors and the Township consumption. Emission conversion factors used in this report were published values for Ontario and can vary year to year based on how clean the energy generation is. The GHG emissions were calculated for the Township and are broken down by fuel source in Figure 3.10 below.

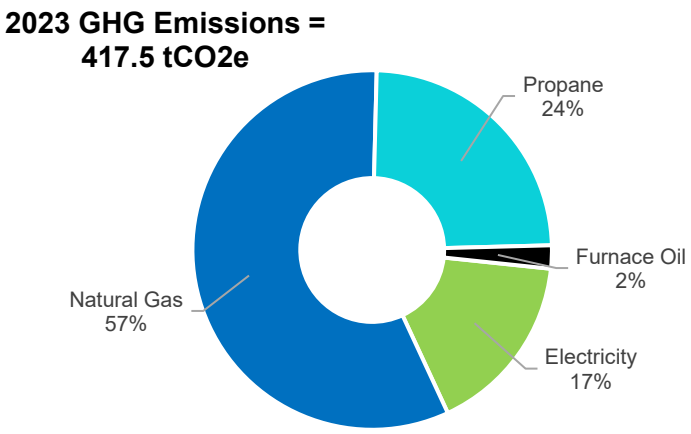

Figure 3.10 Total 2023 GHG Emissions by Fuel Source

To reduce carbon emissions, the energy conservation plan will in part focus on measures to reduce reliance on natural gas use and propane (heating system efficiency improvements) as those two fuels are responsible for 81% of the Township's emissions.

Figure 3.11 below shows the total amount of GHG emissions annually from 2013 to 2023.

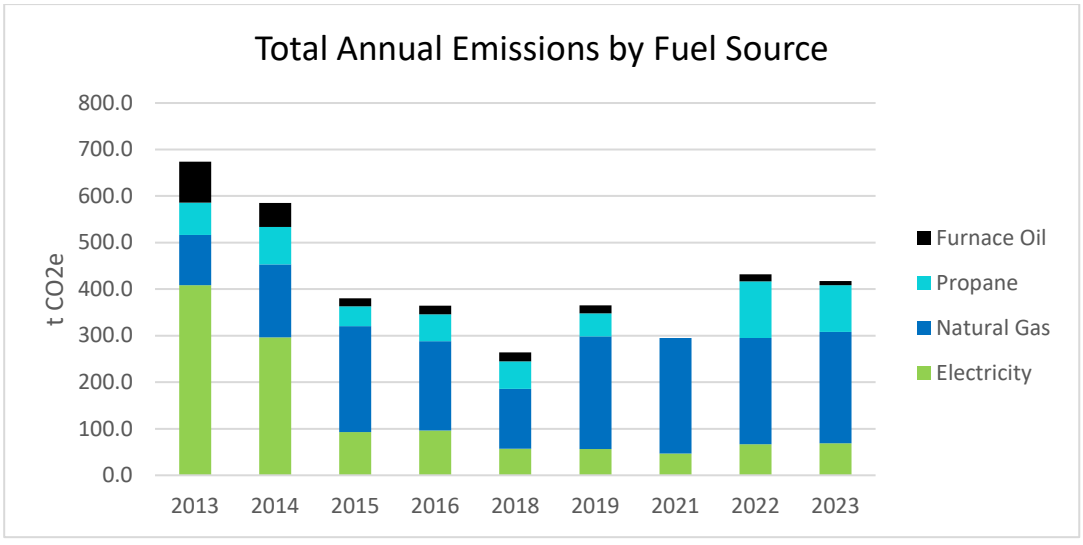

Figure 3.11 Total Annual GHG Emissions from 2013 to 2023 by Fuel Source

Please note that emissions conversion factors have changed significantly for electricity production in Ontario. Specifically in 2014 electricity became significantly cleaner when the last of the coal fired electricity generation plants were shut down. The effect of this can be seen in Figure 3.11 above. Oro-Medonte celebrates that GHG emissions at Township facilities have dropped approximately 39% since 2013.

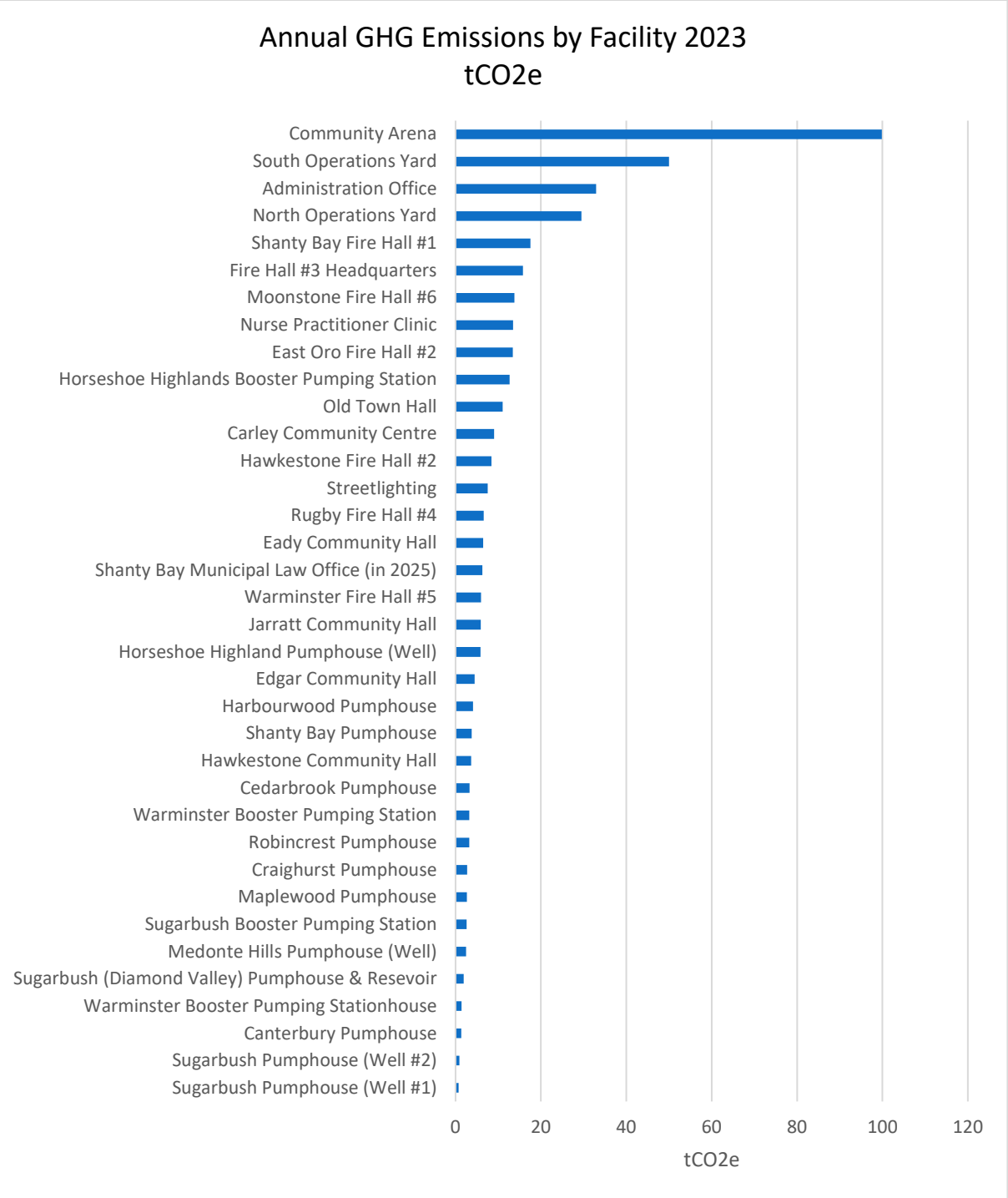

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Figure 3.12 2023 GHG Emissions by Facility

Figure 3.12 above illustrates the relative GHG emissions generated from energy consumption by facility for 2023. The Community Arena, South Operations Yard, Administration Office and North Operations Yard are the largest contributors to the Townships GHG emissions.

Figure 3.13 below shows 2023 GHG emissions from electricity and fuel consumption by department.

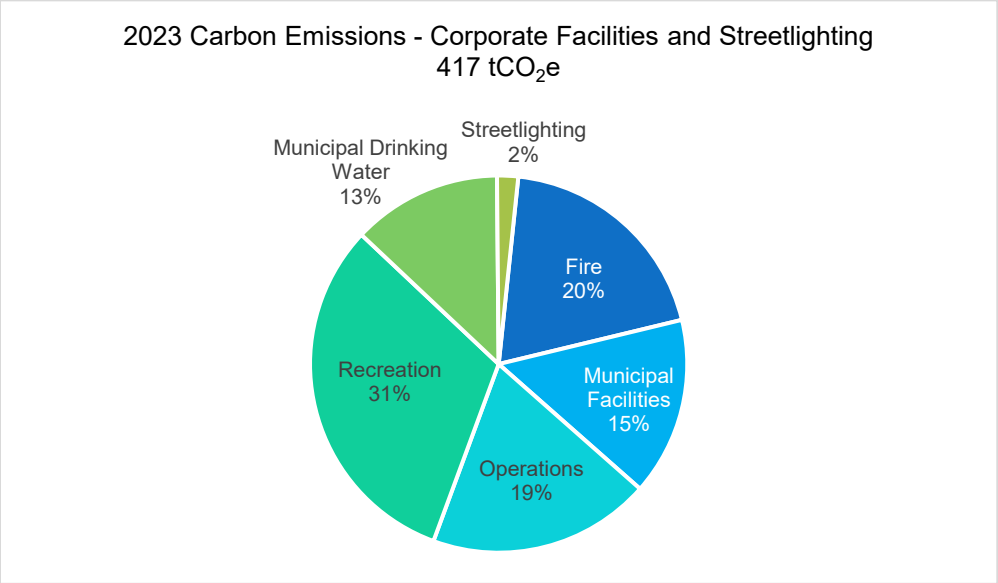

Figure 3.13 2023 GHG Emissions by Department

4. Energy Conservation Goals

The Township of Oro-Medonte has established the following set of goals and targets to strive for over the next five years. The goals and targets were developed within the context of the community feedback received as part of the ongoing development of a Climate Action Plan, the current energy consumption picture, and the projected savings from identified conservation projects. The energy targets cover a five-year period from 2024 to 2029.

4.1 Objectives and Goals

The Township of Oro-Medonte through this plan will seek to:

- ✓ Improve the energy efficiency of facilities, using best practices to reduce operating costs, energy consumption and GHG emissions.
- ✓ Create a culture of conservation.
- ✓ Improve the visibility of energy consumption data and analysis to track performance and drive change.

4.2 2029 Energy Reduction Target

The conservation target by year 2029 is to reduce the consumption of fuels and electricity in all existing Township operations by 5% (203 eMWh) compared to 2023 levels (4,069.2 eMWh). In line with the Partners for Climate Protection Program, this plan will also support the Township's goal to reduce GHG emissions at corporate facilities by 10% (42 tCO_2e) by 2029 compared to 2023 levels (417 tCO_2e). To achieve these emission reduction targets, the Township will focus on fossil fuel conservation and fuel switching opportunities. As the Township is growing, we also commit to exceeding the current average building energy intensity for any new buildings.

5. Conservation Strategies – The Next Five Years

Strategies have been developed to focus our energy conservation efforts and to ensure continuous progress towards the Township's energy conservation goals discussed in Section 4.0 of this report. The following focus areas have been selected to drive conservation strategy over the next 5-year period:

- Energy efficient guidelines for capital asset planning and new construction;
- Life cycle costing, planning and purchasing processes;
- Conservation projects: commissioning, condition assessments and energy audits;
- Energy performance monitoring and tracking program;
- Energy conservation training / education.

5.1 Guidelines for Energy Efficient Purchases – Capital Asset Planning

The Township will develop an energy efficiency standard for future capital purchases covering various topics including:

- Heating systems - boilers, rooftop units, heat pumps, unit heaters;
- Air Handling – exhaust fans, energy or heat reclamation;
- Refrigeration and cooling systems – space cooling, refrigerators, ice plant equipment;
- Domestic Hot Water – fuel switching to electricity, tankless options; and
- Building Automation Controls and monitioring.

These guidelines will ensure that energy efficient technologies are selected consistently across the portfolio and that choices minimize the use of fossil fuels wherever possible. It is critical for the Township to ensure that the best decisions are made when replacing large capital equipment as these assets will often be in service for several decades. For this reason, high efficiency technologies are often financially and environmentally preferable to replacing units in kind.

The Township of Oro-Medonte will embed energy management into the Township's

capital and operational decision-making processes, including capital and asset management plans, budgeting, procurement and project design.

5.2 Energy Efficiency Standards for New Buildings

Tied in with the guidelines and standards for asset management discussed above, the Township will begin the development of an energy efficiency standard for new buildings. This will include, at a minimum, the following criteria:

- Ensure new construction meets the standards set out by the National Energy Code of Canada for Buildings (NECB)
- Commit to an integrated design process that takes a holistic approach, incorporating energy efficiency, renewable energy and sustainable green design features.
- Minimize or eliminate the need for fossil fuel consumption
- Create energy generation opportunities if economically viable.

5.3 Life Cycle Costing

Due to the long life of many larger capital purchases, for example boilers with 25-year useful lifespans, it is critical for the Township to ensure that the best decisions are made when replacing at end of life. For this reason, the total cost of operating the asset (including maintenance and energy costs) over its lifetime must be included when reviewing capital costs and comparing financial criteria. This is called life cycle costing (LCC). Energy efficient technologies are often financially and environmentally preferable when costs over the total life of an asset are reviewed. LCC will be incorporated into the financial assessment process for all large capital purchases.

5.4 Conservation Projects: Commissioning, Condition Assessments, Audits

Energy savings will be delivered through the identification and implementation of projects which reduce energy consumption across the existing facility portfolio. The projects will be identified by continuous facility recommissioning, condition assessments and energy audits. The conservation projects will predominantly fall into

one of the following categories:

- Heating systems - boilers, rooftop units, unit heaters;
- Refrigeration and cooling systems – space cooling, refrigerators, ice plants;
- Air Handling – exhaust fans, air handling units
- Building Automation and Process Controls
- Building Envelope – infiltration, insulation
- Lighting – upgrades to LED
- Domestic Hot Water – fuel switching to electric, instantaneous heating units

5.5 Energy Performance Tracking and Monitoring

The Township will continue to improve energy measurement, monitoring and tracking systems to increase understanding and visibility of energy use across the portfolio. The objective will be to improve the data interface such that staff can access and use the information to track consumption, monitor progress from projects, and identify opportunities.

In addition to enhanced energy data management processes, the Township will undertake deeper analysis and assessment of energy use at specific facilities through energy audits. This analysis will quantify the impact of weather, conservation efforts, operating schedules and other factors on energy use so that additional opportunities can be identified.

5.6 Energy Conservation Training / Education

The Township will maximize long-term energy savings investments through ongoing staff training. The Township's Management Team is committed to ensuring that energy conservation is a priority for all staff throughout the organization. An improved understanding of how energy is used, controlled and its environmental impact is important for all municipal staff.

Each staff member can contribute significantly to the achievement of energy conservation goals of the corporation. Both general energy training and specific

technical training on efficient use of equipment and systems is a proven method of ensuring building and operations staff minimize consumption within existing systems.

6. Five-Year Action Plan

A critical part of any plan is the detailed list of specific actions needed to achieve the desired goals and objectives. The Township of Oro-Medonte has developed a key opportunity list which will help ensure the Township meets the energy reduction goals set out in Section 4.0 of this report.

Energy conservation measures can be categorized as technical (e.g. installing heat pumps in municipal facilities), organizational (e.g. establishing energy efficient policies or protocols), or behavioural (e.g. running a daylight harvesting campaign, where lights are turned off on sunny days). With these three categories in mind and the priorities discussed in Section 5.0 specific actions have been developed and are shown in Table 6.1 below.

Table 6.1 Township of Oro-Medonte - Energy Conservation Action Plan

CONSERVATION TARGET: 5% Reduction in Energy Consumption and 10% GHG Emissions Reduction by 2029

Facility	Strategic Focus	Project Type	Description	Timing
All	Capital Purchasing Guidelines	Organizational	Develop energy efficient purchasing standards and guidelines for key infrastructure: Heating systems, pumping, cooling system, ice plant equipment, equipment controls, building envelope.	2025
All	GHG Reduction Guideline	Organizational	Develop natural gas reduction strategy which would be integrated into capital/asset management processes	2025
N/A	Conservation Training	Organizational	Identify both technical and general energy conservation training needs and set up training for applicable staff. Review subsidized training opportunities available through AMO/LAS and SaveOnEnergy programs.	2025
N/A	Life Cycle Costing	Organizational	Integrate Life Cycle Costing (LCC) into the capital asset purchasing process to ensure operating costs are incorporated into financial decision making.	2025
Various	Conservation Projects	Building Envelope	Take infrared images of external walls to help identify infiltration, thermal bridging and insulation issues.	2025
Various	Conservation Projects	Energy Audits	Complete energy audits for five key buildings	2025
Lions 2 Ball Diamond	Conservation Projects	Lighting	Replacing existing lighting with LED	2025
Administration Building	Conservation Projects	Lighting	Upgrade lighting from T8 Fluorescent Fixtures to LED	2025
Nurse Practitioner Building	Conservation Projects	Lighting	Upgrade lighting from T8 Fluorescent Fixtures to LED	2025

Facility	Strategic Focus	Project Type	Description	Timing
Carley Hall	Conservation Projects	Fuel Switching	Change heating system from Fuel Oil to Propane	2025
Sweetwater	Conservation Projects	Lighting	Upgrade lighting to LED	2025
Horseshoe Valley	Conservation Projects	Lighting	Upgrade lighting to LED	2025
Shellswell Park	Conservation Projects	Lighting	Upgrade lighting to LED	2025
Arena	Conservation Projects	Lighting	Replace any remaining fixtures with LED	2025
Fire Station #6	Conservation Projects	Lighting	Retrofit office and training room lights with LED	2025
Fire Station #5	Conservation Projects	Lighting	Retrofit all lights to LED	2025
Administration Building	Conservation Projects	Controls	BAS system upgrade (optimal start/stop, C02 detectors)	2026
Arena	Conservation Projects	Fuel Switching	Consider upgrading ice resurfacer from natural gas to electric	2028

Appendix A

List of Facilities Included in the Plan

Table A.1 Township Facilities and Infrastructure within Boundaries of this Plan (as of 2025)

Name	Address	Use	Area (ft^2)
Fire Hall #3 Headquarters	3375 Line 4 N	Fire	7675
Hawkestone Fire Hall #2	289 Line 11 S	Fire	3800
Moonstone Fire Hall #6	5668 Line 7 N	Fire	4070
Rugby Fire Hall #4	1904 Old Barrie Rd E	Fire	7680
Warminster Fire Hall #5	1891 Warminster Side Road	Fire	2211
Shanty Bay Fire Hall #1	300 3rd Line South, Shanty Bay	Fire	9537
East Oro Fire Hall #2	529 11th Line N	Fire	14048
Fire Reservoir - Nevis Ridge Dr.	301 Nevis Ridge Dr	Fire	N/A
Fire Reservoir - Lauder Rd.	30 Lauder Road	Fire	N/A
4 Martinbrook (Fire Reservoir)	16 Trillium Trail	Fire	N/A
16 Trillium Trail - Fire Well	Pump Service - Besse	Fire	N/A
2565 Bidwell Road - Pump Stn	Twp of Oro Medonte	Fire	N/A
Administration Office	148 Line 7 S	Municipal Facility	16800
Old Town Hall	833 Line 7	Municipal Facility	1988
Nurse Practitioner Clinic	3331 Line 4 North	Municipal Facility	6119
Shanty Bay Municipal Law Office in 2025 (previously Fire Hall #1)	1950 Ridge Road	Municipal Facility	1322
North Operations Yard	344 County Rd 19	Operations	7600
South Operations Yard	833 Line 7 N	Operations	12465
North Yard - Sand Storage	4256 Line 7 S	Operations	10797
South Yard Salt/Sand Storage	1525 7th Line N - Pole Service	Operations	10645
Carley Community Centre	396 Warminster SR	Recreation	700
Community Arena	2188 Hwy 11 S	Recreation	42500
Eady Community Hall	73 Eady SR	Recreation	1867
Edgar Community Hall	1167 Old Barrie Road	Recreation	1600
Hawkestone Community Hall	3 Allen Street	Recreation	2175
Jarratt Community Hall	837 Horseshoe Valley	Recreation	2290
67 Eady SR Shed	67 Eady SR	Recreation	1128

Name	Address	Use	Area (ft^2)
Oro African Church	1645 Line 3 N	Recreation	640
Small Cresent Storage	1 Small Crescent	Recreation	1614
Sweetwater Park	3353 6th Line N	Recreation	175
Shelswell Park	118 Lakeshore Rd E	Recreation	140
Horseshoe Valley Memorial Park	3387 Line 4N	Recreation	100
Ramey Park	5464 Line 8 Con Lt 15	Recreation	250
Bayview Memorial Park	687 Lakeshore Rd.	Recreation	850
Danny McHugh Park	1911 Warminster SR	Recreation	1340
Ravines Park	8 Blackcomb Drive	Recreation	0
Vasey Park	4851 Vasey Road	Recreation	400
Lions 1 Ball Diamond	71 4th Line N	Recreation	0
Lions 2 Ball Diamond	71 Line 4 N lights	Recreation	0
Canterbury Pumphouse	1 Somerset Blvd	Environmental Services	140
Cedarbrook Pumphouse	1547 Ridge Rd E	Environmental Services	170
Craighurst Pumphouse	33 Procee Circle	Environmental Services	852
Sugarbush (Diamond Valley Pumphouse & Reservoir)	34 Diamond Valley Drive	Environmental Services	1080
Harbourwood Pumphouse	40 Shelswell Blvd	Environmental Services	336
Horseshoe Highlands Pumphouse (Well)	1A Country Club Lane	Environmental Services	900
Horseshoe Highlands Elevated Water Tower	52 Highland Drive	Environmental Services	n/a
Maplewood Pumphouse	40 Maplewood Pkwy	Environmental Services	180
Medonte Hills Booster Pumping Station	17A Alpine Drive	Environmental Services	81
Medonte Hills Pumphouse (Well)	5341 Line 7 N	Environmental Services	527
Robincrest Pumphouse	5464 Line 8 N	Environmental Services	517
Shanty Bay Pumphouse	1950 Gowan Road	Environmental Services	300
Sugarbush Booster Pumping Station	65 Huronwoods Drive	Environmental Services	452
Sugarbush Pumphouse (Well #1)	10 Huronwoods Road	Environmental Services	236

Name	Address	Use	Area (ft^2)
Sugarbush Pumphouse (Well #2)	3310 Line 6 N	Environmental Services	280
Sugarbush Reservoir	6 Oneida Avenue	Environmental Services	n/a
Warminster Pumphouse	2093 Warminster Sideroad	Environmental Services	485
Warminster Booster Pumping Station	1 Georgian Drive	Environmental Services	565
Horseshoe Highlands Booster Pumping Station	3333 Line 4 N	Environmental Services	2500

APPENDIX 7
Energy Conservation Project Summary

	Facility	Department	Category	Description	Fuel Savings: Electricity	Fuel Savings: Natural Gas
1	All	All	DHW	Convert N.G. Boilers to Electric at End of Life		✓
2	All	Various	Envelope	Replace Aluminum Framed Windows with High Efficiency at Er	✓	✓
3	Administration Centre	Corporate Facilities	HVAC	Review of VAV Settings (Recommission)	✓	✓
4	Administration Centre	Corporate Facilities	HVAC	Use of Economizer	✓	
5	Administration Centre	Corporate Facilities	HVAC	Static Pressure and Temperature Resets	✓	✓
6	Administration Centre	Corporate Facilities	HVAC	Outdoor Air Control and Optimal Start		✓
7	Administration Centre	Corporate Facilities	HVAC	Building Exhaust Fans	✓	✓
8	Administration Centre	Corporate Facilities	HVAC	Replacement / Upgrade of Baseboard Heating Controls	✓	
9	Administration Centre	Corporate Facilities	HVAC	Upgrade of Electric Space Heaters	✓	
10	Administration Centre	Corporate Facilities	Lighting	Replacement of Fluorescent Fixtures with LED	✓	
11	Administration Centre	Corporate Facilities	Lighting	Occupancy Sensors	✓	
12	Administration Centre	Corporate Facilities	Envelope	Infiltration - Draft Reductions		✓
13	Administration Centre	Corporate Facilities	DHW	Domestic Hot Water (DHW) Loop Control		✓
14	Community Arena	Recreation	Ice Plant	Floating Head Pressure Control	✓	
15	Community Arena	Recreation	Ice Plant	Enhanced Speed Control of Brine Pumps	✓	
16	Community Arena	Recreation	Ice Plant	Ice Sheet Water Quality Study - Water Purification	✓	
17	Community Arena	Recreation	General	Optimizing Electrical Load Trends in Winter	✓	
18	Community Arena	Recreation	HVAC	Optimize Temperature Setbacks	✓	✓
19	Community Arena	Recreation	HVAC	Control of Baseborad Heaters	✓	✓
20	Community Arena	Recreation	HVAC	Destratification Fans - Olympia and Park Bays	✓	
21	Community Arena	Recreation	HVAC	Optimization of Boiler Controls		✓
22	Community Arena	Recreation	Lighting	Enhanced Control of Arena Lighting	✓	
23	Community Arena	Recreation	Lighting	Replacement of Fluorescent Fixtures with LED	✓	
24	Community Arena	Recreation	Lighting	Installation of Occupancy Sensors	✓	
25	Community Arena	Recreation	Envelope	Draft Reductions		✓
26	Community Arena	Recreation	Envelope	Electric Ice Resurfacers	✓	
27	Edgar Community Hall	Corporate Facilities	HVAC	Optimization of Setback Temperature Controls		✓
28	Edgar Community Hall	Corporate Facilities	Lighting	Replacement of Fluorescent Fixtures with LED	✓	
29	Edgar Community Hall	Corporate Facilities	Lighting	Occupancy Sensors	✓	
30	Edgar Community Hall	Corporate Facilities	Envelope	Draft Reductions		✓
31	Edgar Community Hall	Corporate Facilities	DHW	Piping Insulation		✓
32	Fire Hall #3	Fire	HVAC	Use of Economizer	✓	
33	Fire Hall #3	Fire	HVAC	Optimization of Setback Temperature Controls	✓	✓
34	Fire Hall #3	Fire	HVAC	Replacement / Upgrade of Baseboard Heating Controls	✓	
35	Fire Hall #3	Fire	HVAC	Upgrade of Electric Space Heaters	✓	
36	Fire Hall #3	Fire	Lighting	Occupancy Sensors	✓	
37	Fire Hall #3	Fire	Envelope	Draft Reductions		✓
38	Fire Hall #3	Fire	DHW	Domestic Hot Water (DHW) Loop Control, Piping Insulation		✓
39	Fire Hall #3	Fire	DHW	Replacement of N.G. Boiler with Electric		✓
40	Operations South Yard	Operations	HVAC	Optimize Temperature Setbacks	✓	✓
41	Operations South Yard	Operations	General	Shutdown Unused Bays in Winter		✓
42	Operations South Yard	Operations	HVAC	Upgrade of Electric Space Heaters	✓	
43	Operations South Yard	Operations	Lighting	Occupancy Sensors	✓	
44	Operations South Yard	Operations	Envelope	Draft Reductions - External Doors		✓
45	Operations South Yard	Operations	Envelope	External Door Controls		✓