2024-2028
ENERGY CONSERVATION DEMAND MANAGEMENT PLAN

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1.0 INTRODUCTION

Located on the eastern shore of Lake Huron within the County of Huron, The Town of Goderich became incorporated in 1850 and is home to approximately 8,000 residents. The Town of Goderich owns and maintains fifty-eight facilities including seven buildings associated with the municipal airport, seven buildings/structures associated with the cemetery (three being columbariums), two treatment plants, nine pavilions/outdoor washroom facilities, a municipal childcare center, a fire hall, a library, a medical center, a town hall, two operations buildings, a seniors community center, two recreation centers, six commercial properties, nine storage sheds, five gazebos, two performance stages and a lighthouse.

The Town of Goderich's 2024-2028 Conservation Demand Management Plan provides a brief background and summary of the requirements relating to Ontario Regulation 397/11 *Energy Conservation and Demand Management Plans.* Ontario Regulation 397/11 was introduced by the provincial government in 2011 under the *Green Energy Act* and was moved to reside under the *Electricity Act* in 2019. The regulation requires municipalities, universities, school boards and hospitals to annually report their energy consumption data to the province. A list of the required facilities that municipalities are to include in their annual energy consumption report to remain in compliance with Ontario Regulation 397/11 can be found in Appendix A. Additionally, the regulation requires municipalities to publish a Conservation Demand Management (CDM) plan every five (5) years.

Results from the most recent energy consumption report submitted to the province can be found in Appendix B. Additionally, completed energy reduction projects from the Town's previous CDM Plan (2019-2023) can be found in Appendix C, while a list of new energy conservation and greenhouse gas (GHG) reduction projects to implement over the next five (5) years (2024-2028) can be found in Appendix D.

1.1 Conservation Demand Management

Ontario Regulation 397/11 was established to help municipalities better understand their energy usage, develop conservation plans to guide energy savings and demonstrate leadership in conservation.

The Town of Goderich's 2024-2028 CDM Plan was developed to meet the requirements of Ontario Regulation 397/11 and further the implementation of projects to formally address energy conservation and GHG reduction initiatives. The Town of Goderich has been committed to energy conservation for many years to reduce energy consumption, reduce GHG emissions, decrease operating costs and to set an example for the community as to why energy conservation is important. It is the intention of the municipality to further develop the CDM Plan and enhance the municipality's energy conservation commitments with Goderich Town Council's approval and as the Town's aging infrastructure requires rehabilitation and/or replacement. Similar to the Town's previous 2019-2023 CDM Plan, this five-year plan is valid from 2024-2028, at which time a thorough review process will be required for a subsequent five-year plan.

1.2 Purpose

The 2024-2028 CDM Plan aims to provide a basis for the Town of Goderich to implement improvements to its infrastructure and operations that reduce energy usage, associated energy costs, as well as environmental effects of the Town's activities.

1.3 Goals and Objectives

- To improve energy efficiency within Town facilities, reduce GHG emissions and energy consumption in day-to-day operations and extend the lifecycle of Town assets, where possible;
- To maximize fiscal resources through direct and indirect energy cost avoidance;
- To increase conservation knowledge and mindfulness among staff through education and utilizing best practices;
- To demonstrate leadership and awareness within the Town of Goderich community by creating a culture of conservation and sustainability;
- To increase the comfort and safety of staff and citizens while using Town facilities;
- To support Ontario's Long-Term Energy Plan target of 30 TWh by 2032; and
- To support Ontario's Conservation First policy, where conservation is the first resource considered before building new generation and transmission facilities, wherever cost-effective.

1.4 Reporting Requirements

A requirement of Ontario Regulation 397/11 involves municipalities reporting electricity and natural gas consumption to the Ministry of Energy on an annual basis. The Town's most recent energy consumption values, based on 2023 electricity, natural gas and GHG emission data, can be found in Appendix B.

2.0 ENERGY CONSERVATION COMMITMENTS

2.1 Energy Conservation and Greenhouse Gas (GHG) Reduction Projects

The completion of the energy consumption projects from the Town's 2019-2023 Energy Conservation and Demand Management Plan has continued to progress the municipality's Energy Conservation Strategy. The completed projects from the previous Energy Plan can be found in Appendix C. The implementation of proposed energy conservation measures throughout Town-owned infrastructure will continue to promote successful conservation practices.

The proposed energy conservation measures to support the Town's Energy Conservation Strategy and assist in achieving its corporate GHG reduction target can be found in Appendix D. Council will review the proposed energy conservation measures during annual budget discussions. These proposed measures may change as technology is improved, or the priorities of Council are altered.

2.2 Corporate Energy Conservation Strategy

In 2022, the Town of Goderich completed an ASHRAE Level 1 Energy Audit of all municipal facilities. The energy audit identified nine (9) specific sites that comprised approximately 90% of the total annual electricity and natural gas usage within the portfolio of municipal buildings, which include the following:

- Maitland Recreation Centre
- Memorial Arena and Community Centre
- Goderich Wastewater Treatment Plant
- Goderich Library
- Maitland Valley Medical Clinic
- Goderich Water Treatment Plant Building
- Public Works Garage
- Child Care Centre
- Fire Hall

Appendix I shows the greenhouse gas emissions from 2016 to 2023 for the nine municipal facilities listed above. The ASHRAE Level 1 Energy Audit recommended specific energy conservation measures for each municipal facility. From these recommendations, Town staff developed a short-term Energy Conservation Strategy to implement various energy conservation measures in municipal facilities from 2024 to 2030 (the GHG reduction target year), with an emphasis on implementing energy conservation measures within the nine municipal facilities listed above to more successfully reach our GHG reduction target by 2030.

2.3 Partners in Climate Protection (PCP) Program Corporate Reduction Target

The Partners for Climate Protection (PCP) program is a five-step milestone framework to assist municipalities in addressing climate change through analysis of current emissions, setting reduction targets, developing, and implementing a climate action plan, as well as monitoring long-term progress. The Town of Goderich has been a member of the PCP program since 2020.

During the fall of 2021, the Town of Goderich, through the Federation of Canadian Municipalities (FCM) and the International Council for Local Environmental Initiatives (ICLEI) Partners for Climate Protection (PCP) program, was awarded its PCP Milestone 1 for creating corporate and community baseline emission inventories and forecasts. The corporate GHG emissions by sector and corporate energy usage by source can be found in Appendix E, while the community GHG emissions by sector and community energy usage by source can be found in Appendix F. The ten-year business-as-usual (BAU) forecast for corporate and community GHG emissions can be found in Appendix G.

On August 14, 2023, Goderich Town Council passed a council resolution (Appendix H) to reduce the municipality's corporate GHG emissions by 15%-20% and reduce the Town of Goderich's community GHG emissions by 5%-10% below 2019 levels by 2030. These targets, including the

approach used to set these targets, were discussed with ICLEI staff who confirmed they meet Milestone 2 PCP requirements.

Currently, the municipality is working towards achieving its PCP Milestone 3 requirement, which involves the development of a corporate and community Climate Plan.

2.4 Green Municipal Fund Community Buildings Retrofit - Feasibility Study

The Town of Goderich was successful in obtaining funding through the Federation of Canadian Municipalities (FCM) Green Municipal Fund (GMF) Community Building Retrofit Initiative, Feasibility Stream, to integrate energy and GHG reductions into long-term plans for managing community buildings. To capture the greatest GHG reduction potential, the two municipal facilities chosen to be highlighted within the Town's application were the Maitland Recreation Centre and Goderich Wastewater Treatment Plant.

Completion of the feasibility studies will enable the municipality to identify a sequence of GHG reduction measures for each facility to reduce emissions by at least 50% within 10 years, and by at least 80% (i.e., near net-zero GHG emissions) within 20 years. Additionally, the studies will consider unique objectives and constraints (e.g., building use, capital budgets, equipment renewal cycles, etc.). To do this, there are several project deliverables to be accomplished as part of the project including: (1) site investigations at each facility, (2) developing calibrated energy models for each facility, (3) hosting a design workshop where decarbonization measures will be discussed, along with applicable financial considerations and asset management strategies, (4) measure level analysis to develop detailed project metrics for the decarbonization measures selected, (5) compiling the GHG reduction scenarios for each facility, (6) examination of the GHG reduction pathways through a decision making workshop with key stakeholders, and (7) preparation of the final feasibility study reports and presentation to Goderich Town Council. As part of the requirements of the GMF Community Building Retrofit Initiative, the feasibility studies completed at the Maitland Recreation Centre and Goderich Wastewater Treatment Plan will be completed no later than August 31, 2025.

2.5 Electric Vehicle (EV) Charging Stations

2.5.1 Municipally Owned EV Charging Stations within the Town of Goderich

In 2020, the County of Huron (partnered with the Town of Goderich, the Municipality of Huron East and ChargerCrew), were successful in their application through Natural Resources Canada (NRCan) to receive funding for Level 2 electric vehicle (EV) chargers through the Zero Emission Vehicle Infrastructure Program (ZEVIP). The Town of Goderich chose three locations to install dual port Level 2 EV charging stations for public use: Bannister Park, Rotary Cove and the parking lot on Lighthouse Street. The installation of these municipally owned EV charging stations within the Town of Goderich was completed at the end of November 2022.

Additionally, the Town of Goderich owns one dual Level 2 EV charging station located at Town Hall for the three electric vehicles that are included in the municipality's fleet inventory. The EV

charging station located at Town Hall is for staff use only, as it services the two electric vehicles used by the Municipal By-Law Enforcement Department and the third electric vehicle utilized by the Building Department.

2.5.2 Privately Owned EV Charging Stations within the Town of Goderich

In addition to municipally owned private and public EV charging stations, there are four additional dual port Level 2 EV charging stations found within the municipality. Three of these Level 2 EV charging stations are owned by ERTH Power Corporation and located on Stanley Street, Hamilton Street and the parking lot located at Main Beach, with the fourth owned by the County of Huron located at the Huron County Museum.

There is one DC fast charger located on Hamilton Street owned by ERTH Power Corporation. This DC fast charger was installed within one kilometer of Highway 21 to connect the Huron Coast Electric Highway, which spans from Sarnia to Tobermory (a total of 325km).

3.0 INCENTIVE FUNDING

To ensure that the Town of Goderich will take advantage of all funding and grant opportunities related to energy efficient projects, the Town will submit applications when funding opportunities are available through upper tier governments (i.e., provincial and federal level), other government related agencies (i.e., FCM, LAS), as well as liaise with representatives from local utility providers (i.e., Enbridge Gas, IESO, ERTH Power). Town staff and utility representatives are in a unique position to review current and future process improvements, program implementations and projects that can meet future funding requirements. As funding opportunities arise that are suitable for specific energy conservation projects, Town Staff will report to Council and clearly outline the cost savings associated with a successful application.

4.0 ASSET MANAGEMENT

Asset Management planning takes into consideration the potential impacts of climate change and any actions that may be required to address vulnerabilities that may be caused by climate change to the Town's infrastructure assets. This involves any adaptation opportunities that could arise from climate-driven vulnerabilities, as well as mitigation opportunities such as GHG emission reduction targets. In addition, mitigation approaches, such as reduced energy consumption, can be a significant decision driver when replacing new assets or rehabilitating existing assets.

The Town of Goderich's contribution to climate change through GHG emissions will be mitigated in accordance with local reduction targets, financial capacity, and stakeholder support. In addition, climate change will be considered as part of the Town's risk analysis within its asset management plan. Awareness of infrastructure risks will enable the municipality to balance the potential cost of climate change vulnerabilities with the cost of proactively reducing or eliminating these vulnerabilities before they occur.

5.0 SUMMARY

The Town of Goderich's 2024-2028 CDM Plan will assist the Town in meeting energy-related goals, as well as achieving the milestones outlined in the PCP Program. These goals will need to be established annually through Council's approval of the municipality's budget. The Town of Goderich is a large energy user and has significant energy expenditures. This CDM Plan can help reduce GHG emissions, energy usage and associated costs by implementing effective energy reduction strategies, managing energy retrofits, monitoring and tracking the Town's energy usage and introducing energy awareness programs to staff.

APPENDIX A: Ontario Regulation 397/11 - Table 1

Table 1 from Ontario Regulation 397/11 outlines the required facilities that municipalities are to include in their annual energy consumption report.

TABLE 1

Column 1 Item	Column 2 Type of public agency	Column 3 Operation
1.	Municipality	1. Administrative offices and related facilities, including municipal council chambers. 2. Public libraries. 3. Cultural facilities, indoor recreational facilities and community centres, including art galleries, performing arts facilities, auditoriums, indoor sports arenas, indoor ice rinks, indoor swimming pools, gyms and indoor courts for playing tennis, basketball or other sports. 4. Ambulance stations and associated offices and facilities. 5. Fire stations and associated offices and facilities. 6. Police stations and associated offices and facilities. 7. Storage facilities where equipment or vehicles are maintained, repaired or stored. 8. Buildings or facilities related to the treatment of water or sewage. 9. Parking garages.
2.	Municipal service board	1. Buildings or facilities related to the treatment of water or sewage.
3.	Post-secondary educational institution	1. Administrative offices and related facilities. 2. Classrooms and related facilities. 3. Laboratories. 4. Student residences that have more than three storeys or a building area of more than 600 square metres. 5. Student recreational facilities and athletic facilities. 6. Libraries. 7. Parking garages.
4.	School board	1. Schools. 2. Administrative offices and related facilities. 3. Parking garages.
5.	Public hospital	1. Facilities used for hospital purposes. 2. Administrative offices and related facilities.

O. Reg. 397/11, Table 1; O. Reg. 31/15, s. 2.

APPENDIX B: 2023 Energy Consumption Data

Facility	Address	Electricity (kWh)	Natural Gas (m3)	GHG Emissions (tCO2e)
Airport Shed	33868A Airport Road	9,853	-	0.4
Airport Terminal	33868A Airport Road	31,191	1,898	4.8
Bannister Park	180 McDonald Street	30,522	-	1.1
Beach Hut Washrooms	270 South Harbour Road	4,866	-	0.2
Cemetery Shed	35454 Huron Road	4,661	-	0.2
Child Care Centre	376 Cambridge Street	64,768	12,170	25.8
Custodial Shed	North Harbour Road	13,755	-	0.5
Fire Hall	248 Suncoast Drive East	21,608	11,778	23.5
Goderich Library	52 Montreal Street	68,383	15,427	32.3
Harbour Park Washrooms	166 West Street	14,641	-	0.5
Kingston Street Washrooms	35 Kingston Street	7,710	-	0.3
Lighthouse	280 Cobourg Street	2,956	-	0.1
Maitland Recreation Centre	190 Suncoast Drive	2,471,575	167,123	411.7
Maitland Valley Medical Centre	180 Cambria Road North	324,889	14,138	39.0
Memorial Arena	180 McDonald Street	141,592	40,371	83.1
Municipal Office	57 West Street	244,242	132	9.0
Parks Building	371 Parsons Court	13,890	4,663	9.5
Pavilion #2 Washrooms	40 Cove Road	3,769	-	0.1
Pavilion #3 Washrooms	80 Cove Road	6,686	-	0.2
Pavilion #4 Washrooms	351 Cove Road	11,994	-	0.4
Public Works Garage	361 Cambridge Street	33,029	14,117	28.5
Reservoir-Booster Pump Station	371 Parsons Court	213,581	-	7.7
South Street Storage Shed	49 South Street	2,185	-	0.1
Streetlights	57 West Street	429,696	-	15.5
Tourism Centre	93 Hamilton Street	16,998	2,234	4.9
St. David Street Rental Property	33 St. David Street	6,384	2,996	0.2
Traffic Signals	57 West Street	23,695	-	0.9
Victoria Park Washrooms	80 Victoria Street	4,303	-	0.2
Wastewater Treatment Plant	211 Sunset Drive	699,929	6,408	37.6
Water Treatment Plant	100 Cove Road	767,988	-	27.6
TOTAL		**5,691,339**	**293,455**	**766**

APPENDIX C: Previously Completed Energy Consumption Projects

Facility	Measure	Estimated Cost ($)	Completion Date
Airport Maintenance Garage	Conversion of Interior LED Lighting	3,500	2024
	Conversion of Exterior LED Exit Signs	240	2024
Airport Terminal	Conversion of Exterior LED Exit Signs	120	2023
	Roof Replacement	22,200	2024
	Conversion of Exterior LED Lighting	750	2024
	Window Replacement	16,686	2024
Booster Pumping Station	Conversion of Interior LED Lighting	6,611	2024
	Conversion of Exterior LED Exit Signs	397	2024
Cemetery Office and Equipment Depot	Conversion of Interior LED Lighting	750	2024
Child Care Centre	Replacement of Hot Water Heater	8,328	2023
Municipal Electric Vehicle Charging Stations	Lighthouse Street Parking Lot	16,164	2022
	Bannister Park Parking Lot	16,164	2022
	Rotary Cove Parking Lot	16,164	2022
Fire Hall	Conversion of Exterior LED Exit Signs	240	2023
	Conversion of Interior LED Lighting	4,425	2023
	Replacement of Roof-Top HVAC Unit	13,776	2023
Library	Replacement of Roof-Top HVAC Unit	13,949	2023
Maitland Recreation Centre	Main Pump Replacement	26,263	2021
	Ice Plant Gauge and Valve Replacement	30,222	2021
	Installation of Bronze Whirlpool Pump	11,707	2022
	Compressor Replacement Kube #5	10,713	2022
	High Resolution Electronic Entrance Sign	30,003	2022
	Installation of Sliding Doors (Sky Harbour)	7,205	2023
	Compressor Replacement Kube #6	13,012	2023
	Installation of Tankless Hot Water Heater	19,917	2023
	Building Automation System	183,372	2023
	Arena Dehumidifier Replacement	92,005	2023
	Compressor Replacement Kube #2	12,227	2024
	Heat Exchangers for Hot Tub Boiler	10,985	2024
	Pool Dehumidifier Replacement	905,000	2024
	Installation of Interior LED Lighting	5,000	2024
Maitland Valley Medical Centre	Heat Pump Replacement	7,902	2020
	Roof-Top HVAC Replacement	16,666	2020
One Care Building	Roof Replacement	40,000	2024
Parks Garage	Vehicle Bay Door Replacement	6,000	2023
	Conversion of Interior LED Lighting	2,500	2024
Public Works Garage	Conversion of Interior LED Lighting	3,500	2024
	Conversion of Exterior LED Lighting	750	2024

	Roof Replacement	105,661	2022
Rotary Cove Pavilion #4	Roof Replacement	29,679	2023
Town Hall	EV Charging Station Installation	12,929	2019
	Window Replacement	97,146	2021
	Heat Pump Replacement	9,562	2020
	Heat Pump Replacement	12,219	2022
	Heat Pump Replacement	11,541	2023
Victoria Park Washrooms	Conversion of Interior LED Lighting	1,275	2024
Wastewater Treatment Plant	Primary Pumphouse #1 Pump #2	16,851	2021
	Installation of Tube Heaters	7,352	2024
Water Treatment Plant	Replacement of Low Lift Pump #2	14,832	2021
	Replacement of Low Lift Pump #3	38,440	2023
	TOTAL	**$ 1,932,900**	

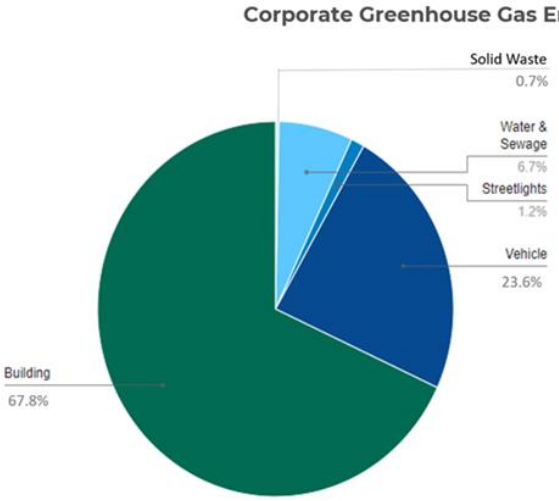
APPENDIX D: 2024-2028 Energy Conservation Measures

Facility	Measure	Estimated Cost ($)	Estimated GHG Reduction (tCO_2e)	Estimated Total Cost Savings ($)	Target Date
Airport Maintenance Garage	Infiltration Reduction	4,450	0.83	330	2025
	Radiant Tube Heaters	13,000	4.23	2,703	2028
Airport Terminal	Temperature Control Set Points	170	0.43	128	2025
	Occupancy Sensor	1,700	0.07	551	2025
	Demand Control Ventilation	1,000	0.64	176	2025
Fire Hall	Make-up Air Controller	3,000	2.76	524	2026
	Temperature Control Set Points	340	3.49	588	2025
	Occupancy Sensor	850	0.04	210	2025
	Instantaneous Hot Water Heater	350	0.15	24	2025
Child Care Centre	LED Lighting Replacement	7,000	0.29	2,415	2027
	Domestic Hot Water Blanket	80	0.46	74	2025
	Temperature Control Set Points	510	3.55	893	2025
Library	LED Lighting Replacement	5,930	0.47	2,340	2025
	Temperature Control Set Points	850	3.38	665	2025
	Infiltration Reduction	7,320	2.51	434	2026
	Roof Top Unit #1 Replacement	20,000	2.70	533	2025
	Roof Top Unit #2 Replacement	20,000	2.70	533	2026
	Roof Top Unit #3 Replacement	20,000	2.70	533	2027
	Roof Top Unit #4 Replacement	20,000	2.70	533	2028
	Roof Top Unit #5 Replacement	20,000	2.70	533	2029
Medical Centre	LED Lighting Replacement	17,000	0.48	2,883	2025
	Exterior LED Replacement	1,800	0.04	253	2025
	Air Balancing	2,500	1.65	903	2027
	Temperature Control Set Points	1,360	3.29	1,705	2025
	Vestibule Heater	680	0.56	3,372	2026
Town Hall	LED Lighting Replacement	16,950	0.97	5,900	2026
	Exterior Lighting Replacement	450	0.02	129	2026
	Occupancy Lighting Control	1,200	0.04	264	2026
	HVAC Retro Commissioning	7,500	0.69	4,198	2028
Parks Building	Infiltration Reduction	4,330	1.37	202	2026
Public Works Garage	Vehicle Bay Air Curtain	6,250	3.47	489	2026
	Infiltration Reduction	5,960	2.64	449	2027
Maitland Recreation Centre*	Dehumidifier Replacement	80,000	1.09	6,179	2027
	Domestic Hot Water Boiler	45,000	48.12	6,577	2026
	Kube Compressors Replacement	12,000	3.84	21,628	2025
	Demand Control Ventilation	7,500	32.93	13,433	2026
	Cooling Tower VFD	5,500	0.85	4,806	2027
	Floating Head Pressure Control	6,500	3.11	17,508	2027

Water Treatment Plant	Heat Recovery Ventilation	4,500	19.98	5,104	2026
	Update of HVAC Equipment	1,000,000	Unknown	Unknown	2026/2027
	Programmable Thermostat	170	0.06	332	2026
	Temperature Control Set Points	1,700	0.14	830	2026
	Smart Thermostats - Baseboards	850	0.04	249	2026
	Low Lift Pump #1 VFD	5,000	0.23	1,361	2026
Wastewater Treatment Plant*	Instantaneous Hot Water Heater	1,000	0.01	70	2027
	Infiltration Reduction	3,460	0.11	647	2027
	Exterior Lighting Replacement	150	0.01	58	2027
	LED Lighting Replacement	8,550	0.21	1,268	2028
	Lighting Control	1,000	0.02	141	2028
	Exterior Lighting Replacement	750	0.05	279	2027
	LED Lighting Replacement	7,350	0.22	1,291	2028
	Lighting Control	800	0.02	113	2028
	Instantaneous Hot Water Heater	350	0.01	60	2027
One Care Building	Make-up Air Replacement	6,500	1.01	390	2029
	Temperature Control Set Points	680	0.47	192	2025
	LED Exit Signs	300	0.01	78	2028
	LED Lighting Replacement	3,450	0.10	550	2028
	Duct Sealing	1,000	0.31	138	2029
	Window Replacement	1,750	0.88	160	2029
	Infiltration Reduction	990	0.22	64	2029
MacKay Centre	LED Lighting Retrofits	990	0.07	442	2025
	LED Exit Signs	120	0.01	31	2025
	Temperature Control Set Points	680	1.18	284	2025
	Duct Sealing	2,000	1.16	170	2026
	ENERGY STAR Condensing Unit	4,000	0.39	57	2029
Huckins Street Building	Temperature Control Set Points	510	2.02	769	2025
	LED Exit Signs	540	0.03	146	2028
	LED Lighting Replacement	9,975	0.46	2,637	2028
	Lighting Control	1,600	0.04	259	2028
	Instantaneous Hot Water Heater	1,000	0.29	59	2029
	Window Replacement	17,500	4.03	1,506	2029
	Infiltration Reduction	8,970	1.51	569	2029
	Roof Replacement	27,000	1.01	385	2030
	TOTAL	**$ 1,489,765**	**177**	**$ 125,957**	

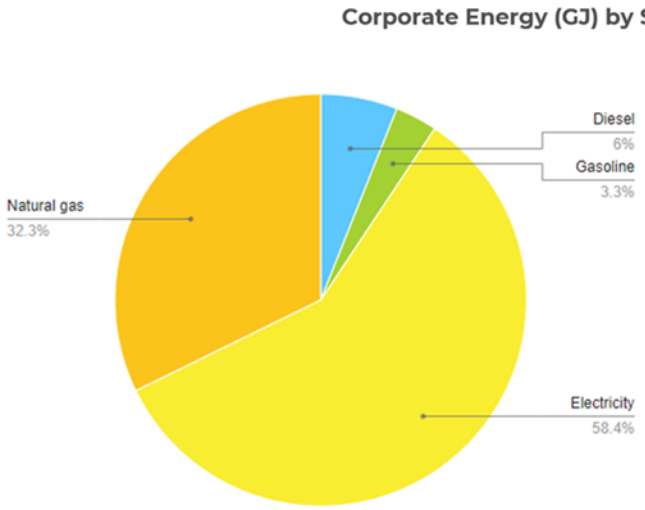
*The energy conservation measures outlined in the above table do not include the decarbonization activities that will be identified for the Maitland Recreation Centre and Wastewater Treatment Plant from FCM's GMF Community Building Retrofit GHG Reduction Feasibility Study.

APPENDIX E: Corporate GHG Emissions and Energy Usage



SECTOR	EMISSIONS (tCO2e)	
Buildings	669	67.8%
Vehicles	232	23.6%
Water and Sewage	66	6.7%
Streetlights	12	1.2%
Solid Waste	7	0.7%
TOTAL:	**986**	**100%**

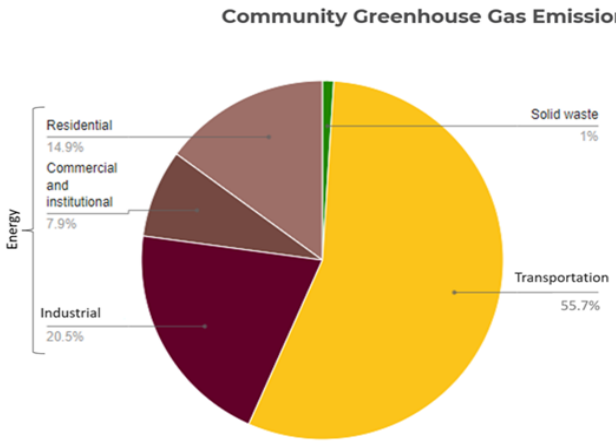
The corporate greenhouse gas emissions (tCO_2e) by sector for the baseline year of 2019 are as follows: buildings (67.8%), vehicles (23.6%), water and sewage (6.7%), streetlights (1.2%) and waste (0.7%). The total corporate greenhouse gas emissions are 986 tCO_2e.



SOURCE	ENERGY (GJ)	
Electricity	20,898	58.4%
Natural Gas	11,543	32.3%
Diesel	2,158	6.0%
Gasoline	1,187	3.3%
TOTAL:	**35,786**	**100%**

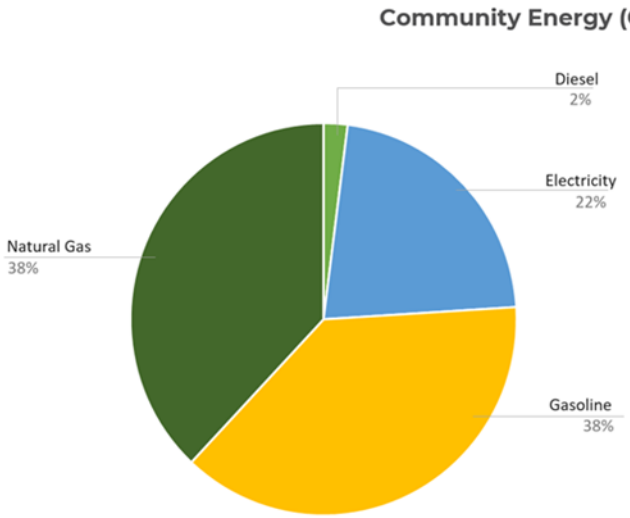
The corporate energy data (GJ) by source for the baseline year of 2019 are as follows: electricity (58.4%), natural gas (32.3%), diesel (6%) and gasoline (3.3%). The total corporate energy consumption is 35,786 GJ.

APPENDIX F: Community GHG Emissions and Energy Usage



SECTOR	EMISSIONS (tCO2e)	
Transportation	63,606	55.7%
Energy -Industrial	23,421	20.5%
Energy -Residential	17,059	14.9%
Energy -Commercial/ Institutional	9,057	7.9%
Solid Waste	1,161	1.0%
TOTAL:	**114,304**	**100%**

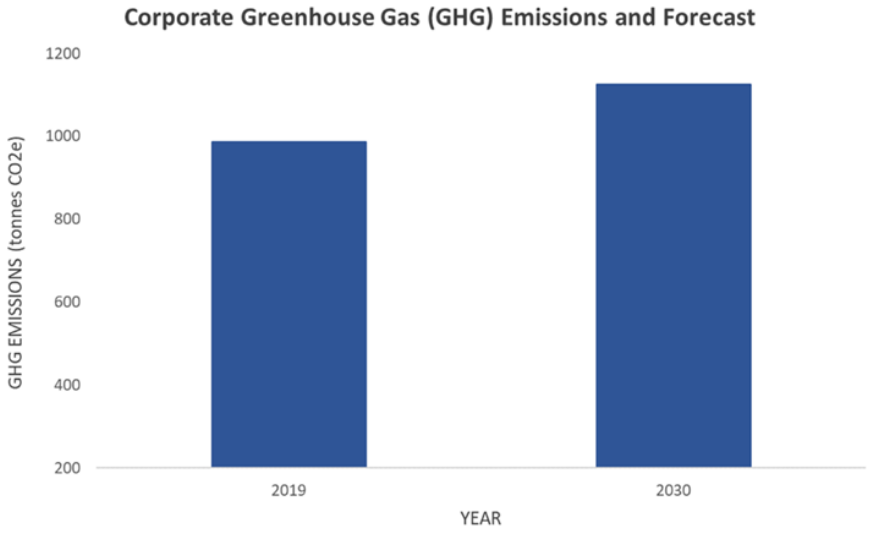
The community-wide greenhouse gas emissions (tCO_2e) by sector for the baseline year of 2019 are as follows: transportation (55.7%), energy from the industrial sector (20.5%) energy from the residential sector (14.9%) energy from the commercial/institutional sector (7.9%) and solid waste (1%). The total community greenhouse gas emissions are 114,304 tCO_2e.



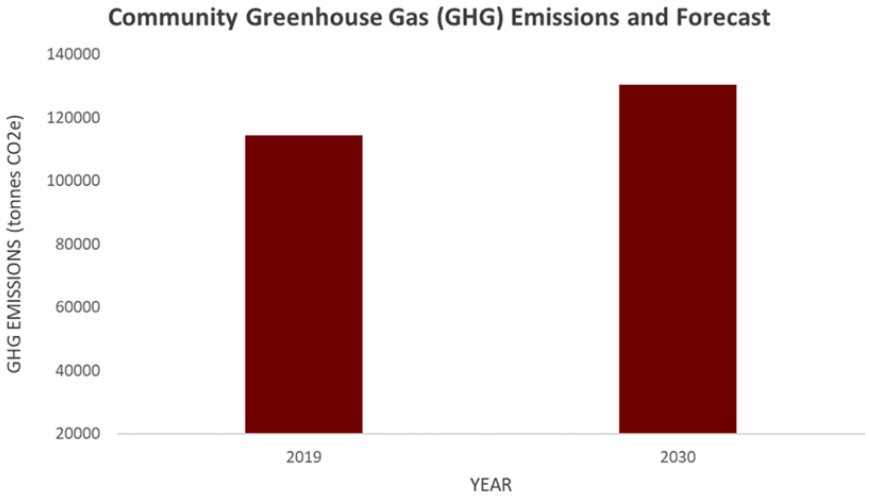
SOURCE	ENERGY (GJ)	
Natural Gas	912,223	38.0%
Gasoline	910,079	38.0%
Electricity	525,795	22.0%
Diesel	46,790	2.0%
TOTAL:	**2,394,887**	**100%**

The community-wide energy data (GJ) by source for the baseline year of 2019 are as follows: natural gas (38%), gasoline (38%), electricity (22%) and diesel (2%). The total energy consumption is 2,394,887 GJ.

APPENDIX G: Ten-Year Business-As-Usual Forecast



The total corporate greenhouse gas emissions for the baseline year (2019) is 986 tCO_2e. The corporate greenhouse gas emissions for the forecast year (2030) is approximately 1,126 tCO_2e, an increase of 140 tCO_2e. The forecast year (2030) uses an annual population growth rate of 1.2% obtained from the 2021 Development Charges Study for the Town of Goderich.



The total community-wide greenhouse gas emissions for the baseline year (2019) is 114,304 tCO_2e. The community-wide greenhouse gas emissions for the forecast year (2030) is approximately 130,330 tCO_2e, an increase of 16,026 tCO_2e. The forecast year (2030) uses an annual population growth rate of 1.2% obtained from the 2021 Development Charges Study for the Town of Goderich.

APPENDIX H: Council Resolution for PCP Milestone 2 GHG Reduction Targets

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Council Resolution for the Adoption of a Greenhouse Gas (GHG) Emissions Reduction Target for the Town of Goderich

Below is a certified true copy of the resolution passed by The Town of Goderich at its Regular Council meeting held August 14, 2023.

WHEREAS The Town of Goderich has been a participating member of the Partners for Climate Protection (PCP) Program, made available through the Federation of Canadian Municipalities (FCM) and the International Council for Local Environmental Initiatives (ICLEI), since February 2020;

AND WHEREAS The PCP program is based on a five-milestone framework that involves completing a GHG inventory and forecast, setting a GHG reduction target, developing a local action plan, implementing the plan, and monitoring progress and reporting results;

AND WHEREAS The Town of Goderich created a corporate and community greenhouse gas inventory to satisfy Milestone 1 of the PCP program, passed by Goderich Town Council at the October 18, 2021 meeting;

AND WHEREAS The Town of Goderich continues to incorporate climate resilience efforts within its Corporate Strategic Plan, Asset Management Policy, Official Plan, Emergency Management Plan and other Town policies to ensure climate change and sustainability efforts are considered, encouraged and supported;

AND WHEREAS Town of Goderich staff continue to promote inter-departmental coordination to ensure the corporation offers an aligned approach to mitigate and adapt to the threats of climate change and its effects to the natural environment, assisting the corporation to reach its Milestone 2 greenhouse has reduction target for corporate operations within the 2030 timeframe;

AND WHEREAS Town of Goderich staff commit to encouraging the Goderich community to reduce their carbon footprint, with a focus on educating and promoting environmentally and financially sustainable programs that will assist the community to reach its Milestone 2 greenhouse gas reduction target within the 2030 timeframe;

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AND WHEREAS a portion of the Town's Environmental Committee's Workplan will be aimed at educating residents and businesses regarding greenhouse gas emission reductions, as well as promoting various energy and waste conservation methods to assist in achieving this community target by 2030;

BE IT RESOLVED That the Town of Goderich commits to reducing its greenhouse gas emissions by 15%-20% below 2019 levels for corporate operations by 2030 and to reduce its greenhouse gas emissions by 5%-10% below 2019 levels within the community by 2030.

Signature
MAYOR, Trevor Bazinet

Signature
CLERK, Andrea Fisher

August 30, 2023 Date

APPENDIX I: 2016-2023 GHG Emissions for the Town's Top Nine (9) Facilities