

City of Sault Ste. Marie Sustainability Report: 2021 – 2022

Prepared by: Tourism and Community Development

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Land Acknowledgement

The City of Sault Ste. Marie (the City) acknowledges, with respect, that we are in Robinson-Huron Treaty territory, that the land on which we are gathered is the traditional territory of the Anishinaabe; home of Garden River First Nation, Batchewana First Nation and the Metis Nation. The City also acknowledges that this area is historically known as Bawating. The City recognizes the importance of our relationship with the Indigenous community, as we move forward together in Reconciliation, and the importance of meaningful consultation with the Indigenous community, who have a commitment to environmental stewardship.

Acronyms

ATMP – Active Transportation Master Plan

BEV – Battery Electric Vehicles

ccASHP - Cold-Climate Air Source Heat Pump

CD&ES - Community Development and Enterprise Services

CDF – Community Development Fund

CEF – Community Efficiency Financing

DSSMSSAB - District Sault Ste. Marie Social Services Administration Board

ESC – Environmental Sustainability Committee

ESP – Expanded Polystyrene

EV – Electric Vehicle

FCM – Federation of Canadian Municipalities

GHG – Greenhouse Gas

GMF – Green Municipal Fund

IESO – Independent Electricity Systems Operator

LED – Light Emitting Diode

LNG – Liquefied Natural Gas

MNRF - Ministry of Natural Resources and Forestry

NRCan – Natural Resources Canada

PCP - Partners for Climate Protection Program

RFP – Request for Proposal

SMT – Senior Management Team

Executive Summary

December 14, 2022, marked the two-year anniversary of Council's unanimously endorsed *Sault Ste. Marie Community Greenhouse Gas (GHG) Reduction Plan 2020 – 2030*. Since the endorsement, the City has been working on its implementation as well as increasing other sustainability initiatives. This work is the result of leadership and active partnerships formed through a spirit of collaboration across multiple departments and community partners.

The City's first Sustainability Report aligns with the Sault Ste. Marie GHG Reduction Plan. Projects and initiatives are categorized under the plans seven pillars which are:

- | | |
|-----------------------------------|-------------------------|
| 1. Buildings & Energy – Community | 5. Green Space |
| 2. Buildings & Energy – Corporate | 6. Economic Development |
| 3. Transportation | 7. Municipal Leadership |
| 4. Waste | |

This report summarizes sustainably efforts in 2021 and 2022, as well as provides an update on the implementation of the GHG Reduction Plan. It also highlights key projects planned for 2023. Staff intend to provide an update on City sustainability efforts to Council on an annual basis.

In 2021, the City made efforts to prioritize corporate efficiency retrofits, in particular taking advantage of the Independent Electricity System Operations (IESO) Retrofit and Small Business Lighting Incentive Programs. Sixteen (16) projects were either initiated and/or completed. This was also furthered in the community through a series of educational webinars that the City delivered in partnership with Garden River First Nation regarding understanding Ontario's Energy System, home energy systems, and residential and commercial energy incentive programs. The City's Green Committee was revised and relaunched as the Environmental Sustainably Committee (ESC). As well, the City's Green Initiatives Fund which established and allocates \$50,000 to local non-profit and City department initiatives annually. The City also joined the United Nations Cities Race to Zero campaign to further reiterate their commitment to the net zero target.

In 2022, the City continued to prioritize corporate energy efficiency retrofits with 21 projects that were initiated. From a community standpoint, the City launched the community efficiency financing study, project which will identify opportunities and challenges that may arise during the development of a residential retrofit financing program for homeowners in Sault Ste. Marie. It will examine the feasibility of implementing a local financing program to address the high upfront cost burden of undertaking home energy retrofits and provide recommendations on the market potential, financing model and program delivery model. The City also launched their Active Transportation Master Plan Project. Another important milestone was the City officially implemented a single use plastics ban that came into effect on November 15, 2022. The ESC also featured a spotlight series on members including the PUC, Algoma University, Natural Resources Canada, and Algoma Steel and their local efforts regarding sustainability. In addition, the City allocated \$90,680.71 towards eleven (11) local non-profit and City department projects under the Green Initiatives Program.

As the City looks ahead to 2023, leadership and staff must continue to prioritize sustainability as part of the quality-of-life value of the City's Strategic Plan through the implementation of the GHG Reduction Plan. A more united and aggressive corporate financial commitment and effort from all departments and Council will be required to meet corporate emission reduction targets.

1. City of Sault Ste. Marie Sustainability Efforts: 2021 – 2022

This section of the City's Sustainability Report will outline sustainability efforts and projects that took place in 2021 and 2022. Efforts are broken down under the Sault Ste. Marie Community GHG Reduction Plan seven pillars which are:

- | | |
|-----------------------------------|-------------------------|
| 1. Buildings & Energy – Community | 5. Green Space |
| 2. Buildings & Energy – Corporate | 6. Economic Development |
| 3. Transportation | 7. Municipal Leadership |
| 4. Waste | |

The report will start with a review of what was completed in 2021, followed by efforts from 2022. A summary of planned initiatives for 2023 will also be provided, followed by an appendix which will provide a task update on the actions outline in the GHG Reduction Plan. The following section of this report outlines the 2021 substantiality efforts.

2. 2021 Sustainability Efforts Summary

An overview of key sustainability efforts and projects that City worked on in 2021 are listed below.

1. Buildings & Energy – Community

Community Energy Efficiency Prioritization

In 2021, a variety of initiatives were undertaken by the City to encourage energy efficiency in the community. In particular, the City partnered with Garden River First Nation to deliver a four-part energy literacy webinar series from September – November 2021. Topics included understanding Ontario's energy sector, your home energy system and residential and commercial energy efficiency incentive programs for retrofits. All webinars were recorded and are available to watch on the City's [webpage](#). Approximately 500 views of the webinars have occurred to date and there were roughly 100 participants who attended the webinars. The City also launched a social media campaign entitled '5 Days of Energy Efficiency' which shared information about different energy efficiency programs and incentives available to businesses and residents in Sault Ste. Marie.

Furthermore, consultation with City Planning and Building departments determined that they currently do not record metrics on homes that are built above and beyond the Ontario building code as they review plans to ensure that all building code requirements are met, not exceeded. This has led to some research conducted by the Sustainability Coordinator to explore embodied carbon emission incentive programming. A presentation was made on December 14, 2021, at the City's Building Permit Open House about embodied carbon.

In addition, application for \$100,000 was submitted to the Federation of Canadian Municipalities (FCM) Green Municipal Fund (GMF) Community Efficiency Financing (CEF) program for funding for a feasibility study.

2. Buildings & Energy – Corporate

Corporate Energy Efficiency Prioritization

In August 2021, the Sustainability Coordinator organized three (3) energy opportunity facility walkthrough site visits with the IESO's Northern Ontario Energy Conservation Officer to look for energy efficiency opportunities at the Old Stone House, Landfill, and GFL Memorial Gardens. The landfill and the Old Stone House were recommended to participate in the Small Business Lighting program. The full facility lighting assessment of the GFL projected yearly lighting cost and maintenance savings of \$56,943.68 and included an estimate for a \$32,333 incentive from the Save on Energy program. It also has the potential to reduce facility GHGs by 12% (or 5.07 tCO₂e). This project has not yet been initiated.

In September 2021, 19 site assessments of City facilities were conducted under the Small Business Lighting program which offers an incentive of up to \$2,000 in energy efficiency lighting upgrades valued at up to \$38,000 in incentives at a variety of smaller city assets. Actual energy savings and incentive will be provided once the City is provided with the project work orders.

To ensure the City maximizes opportunities to take advantage of energy efficiency incentives, tender documents for the LED lighting upgrades to the John Rhodes Community Centre and the Northern Community Centre included wording in the RFP to ensure incentive compliance. The incentives for these projects combined were estimated to be \$9,050.

Corporate Energy Efficiency Incentives and Funding

Multiple energy incentive grants have been pursued since 2019 that encourage energy savings and environmental sustainability. The following tables identified confirmed and potential projects.

Confirmed Projects

Year	Project	Funder	Incentive Estimate	Estimated Annual Energy Savings	Notes
2019	Fire Hall #2 DCV c/w CO2 sensor	Enbridge Commercial	\$500.00	Unknown	Complete
2019	Fire Hall #3 DCV c/w CO2 sensor	Enbridge Commercial	\$500.00	Unknown	Complete
2020	James L. McIntyre Public Library DCV c/w CO2 sensor	Enbridge Commercial	\$500.00	Unknown	Complete
2020	Seniors Drop - In LED	IESO / saveONenergy	\$1,972.00	\$21,068.29	Complete

	Retrofit Incentive				
2020	Transit Garage LED Retrofit	IESO / saveONenergy	\$14,691.00	\$16,355.26	Complete
2021	Enbridge Municipal Energy Plan Incentive Offer	Enbridge Inc.	\$5,000	Not applicable	Complete
2021	GFL Arena and Seating LED Retrofit	IESO / saveONenergy	\$11,200.00	\$17,772.79	Complete
2021	Northern Community Centre Indoor Turf LED Retrofit	IESO / saveONenergy	\$4,320.00	\$5,045.23	Complete
2021	John Rhodes Community Centre LED Arena Retrofit	IESO / saveONenergy	\$4,730.00	Unknown at this time	Complete
2022	Small Business Lighting Incentive for 19 facilities	IESO / saveONenergy	\$38,000.00	Unknown at this time	Partially Complete
Total			\$81,413.00	\$60,241.57	
Total Incentive / Savings				\$141,654.57	

Potential Projects

Year	Project	Funder	Incentive Estimate	Estimated Annual Energy Savings	Notes
2022	Twin Pad AWH (Tentative)	Enbridge Commercial	\$450.00	Unknown	Pending confirmation from Enbridge.

2022	Community Retrofit Program Feasibility Study Funding	FCM CEF	\$80,000.00	Not applicable	80% of \$100,000 project costs for the development of a feasibility study
2023	GFL Facility LED Retrofit (excluding arena and seating)	IESO / saveONenergy	\$30,982.00	\$43,463.68	Not started
2022	LED Field Lighting: 1.North Street, 2.Strathclair , 3.James Elliott Park / Tom Tipton, 4.Merryfield, 5.Esposito, and 6.Anna McCrea	Canadian Infrastructure Bank Retrofit Stream	Unknown	Unknown	CIB offers financing between 40% and 60%; however, projects must reduce GHG emissions by 30%. Require energy saving estimates to see feasibility. Working with Travis Reid to collect quotes.
		Total	\$111,432.00	\$43,463.68	
Total Incentive / Savings				\$154,895.68	

3. Transportation

Resolution passed for acquiring Battery Electric Vehicles (BEVs)

In February 2021, staff prepared a report to council responding to a Council resolution from March 9, 2020 regarding costs of purchasing electric vehicles. This was brought forward on February 22, 2021. It resulted in a resolution to acquire Battery Electric Vehicles (BEVs) for any new light-class vehicles that are acquired for the City fleet on a go forward basis.

Electrification Plan Established for City owned Ice Resurfacers

In November 2021, staff brought forward a report to council highlighting the opportunities associated to electric ice resurfacers and a replacement plan for all five (5) owned machines. As a result, the City will be purchasing their first electric ice resurfacer as part of the Twin Pad Arena upgrade project.

Activities to increase transit ridership

Transit ridership decreased significantly in early 2020 due to the onset of the COVID-19 pandemic. Since then, transit ridership has increased. The City does have incentives to encourage public transit use including a semester pass for university students, a senior and youth pass and a program with the District Sault Ste. Marie Social Services Administration Board (DSSMSSAB) for free ridership. The City has also expanded upon its on-demand transit, a real time passenger app site, as well as the adventure bus program. Information is available on the City's website regarding bus routes and schedules.

4. Waste

Creation of the Plastic Free Pledge

In April 2021, the City's Public Works Department worked in partnership with Clean North to create the City's Plastic Free Pledge. The campaign was designed to both educate and promote a lifestyle that is not reliant on single-use plastics. Households, businesses, schools, community organizations and workplaces were challenged to take the pledge. By taking part in this initiative, participants made a pledge to audit their use of single-use plastics and set attainable goals to reduce and eliminate this waste by moving towards the use of eco-friendly alternatives. The reasoning behind the pledge was to get ahead of expected federal or provincial legislation banning single-use plastics.

Single Use Plastics Ban Project Initiated

On November 15, 2021, City council unanimously directed staff to move forward with a process geared to banning single-use plastics in Sault Ste. Marie effective November 2022. The motion also sought for City staff to create a community waste reduction strategy with robust goals and be in place by the same time.

Reducing waste in City Operations

Many [changes](#) have been made to the Community Development and Enterprise Services (CD&ES) Department by purchasing packages to reduce single use packaging material. As well, the City's Biosolids Management Facility will accept municipal source separated organics as required by the Ontario Food and Organic Waste Policy by 2025.

5. Green Space

Encouraging planting of non-invasive tree species

In 2021, the Environmental Sustainability Committee recommended to the Planning Department that they plant diverse native and non-invasive tree species that are more resilient to climate change as part of all future tree planting initiatives. This was incorporated into the City's draft Official Plan.

CityStudio Urban Tree Canopy Project

Over the course of 2021 the City worked with Algoma University on a few CityStudio projects. The Urban Forestry Plan and Tree Canopy Study Project involved two environmental science students

who worked on developing some of the preliminary components that will ultimately contribute to an Urban Forestry Plan and Tree Canopy Study for the City. The project included background research looking at urban forest management best practices in Cities of similar size and industry as Sault Ste. Marie, as well as some analysis using the iTree software tool (a free software developed by the US Forest Service research and development team that quantifies ecosystem services and benefit values of community trees and forests at multiple scales). This included conducting an estimate of tree canopy coverage within the municipal boundary and reviewing the ecological benefits from an inventory of City park trees conducted previously. The students also completed an inventory of sample plot outside of the university which could be used to add to the City's tree inventory.

6. Economic Development

In 2021, the City's Economic Development team worked on exploring the opportunity of developing a hydrogen hub in Sault Ste. Marie as part of their efforts for industries that require renewable power. They also explored opportunities for new clean energy generation, including biomass and electric vehicle and related technologies. These efforts are ongoing.

In addition, the Economic Development team and the Sustainability Coordinator engaged in conversations with the Ministry of Natural Resources and Forestry (MNR) about ways to encourage the use of biomass as a form of alternative energy to reduce emissions. A review of the City's 2012 District Energy Feasibility Study is also underway as part of this, as it suggested using biomass as an energy source. Dialogue with the province regarding future opportunities associated to hydrogen is also ongoing.

The Government of Canada will be setting up a new, federal agency focused on freshwater conservation and management – The Canada Water Agency. In June 2021 the City formed a Canada Water Agency Task force to lead the pitch on bringing the Canada Water Agency to Sault Ste. Marie. Multiple stakeholders have been consulted and support has been acquired from community partners including First Nations and Industry. The City was not selected as the host site in an announcement made in early 2023.

7. Municipal Leadership

Launch of the City's Environmental Sustainability Committee

In January 2021, the City transitioned the former Municipal Environmental Initiatives Committee (Green Committee) to be replaced by the Environmental Sustainability Committee (ESC). A total of 25 applicants applied. The inaugural term of the committee resulted in the participation of the following individuals including: Councillor Donna Hilsinger (Chair), Jaime Graham (PwC) (Co-Chair), Rimaz Abakar (Algoma Steel), Mark Britton (PUC), Erik Emilson (Natural Resources Canada), Fred Post (Algoma Steel), Andre Riopel, Bhavna Sikka (Tenaris) and Pedro Antunes (Algoma University). Over the course of 2021, the committee met eight (8) times and developed a set of environmental sustainability priorities for consideration by the City. These priorities are listed below.

1. Planning and Urban Design

- Centralize key infrastructure to ensure connectivity and densification.
- Prioritize affordability and accessibility when developing new public infrastructure.

- Conduct infrastructure improvements to make it convenient to encourage uptake in active and electric transportation (e.g. increase the number of bike racks and electric charging stations).
- Implement parking reform to encourage active transportation.
- Create a pedestrian friendly community and culture.

2. Green Space

- Decrease emissions from City lawn care through the electrification of maintenance equipment.
- Practice strong forest management and tree planting to use our urban forest as a carbon sink. Specifically, by conducting a study to determine carbon sequestration and storage from the urban forest. Consider exploring carbon credits as a form of revenue generation for the City's net zero plans.
- Conduct an urban tree canopy study to determine baseline tree cover and plan for future tree planting.
- Plant diverse native and non-invasive tree species that are more resilient to climate change as part of all future tree planting initiatives.

3. Built Environment

- Prioritize retrofitting existing buildings to address building vacancy across the city, especially in the downtown.
- Mandate that all new City buildings be low emission and carbon neutral.
- Use local energy sources (e.g. forest by-products such as biomass) and explore low carbon fuels such as hydrogen to reduce community energy and building emissions.
- Incorporate both low-carbon and carbon-storing materials in construction of new builds.

4. Investment

- Commit to investing in feasibility studies to support future projects in renewable energy, active transportation and energy efficiency.
- Groom Hub trail/sidewalk during winter to encourage active transportation.

The priorities have been shared with the Planning Department to be considered in the update to the Official Plan.

Launch of the Community Development Fund (CDF) Green Initiatives Program

In 2021, the City launched the CDF Green Initiatives Program. The purpose of the Green Initiatives Program is to support green initiatives locally. Funding applications are open to City Departments as well as local non-profits.

The City's Environmental Sustainability Committee (ESC) recommends the allocation of funds for eligible projects or programs that support the City's environmental plans and practices, in particular projects that result in the reduction of greenhouse gas (GHG) emissions, water quality/rehabilitation or increase energy efficiency, healthy and resilient ecosystems, including habitat restoration, active transportation and/or waste reduction.

Funding applications are reviewed by the ESC in accordance with the CDF – Green Initiatives Program [guidelines](#) and are recommended to Council for final approval. Total funds available for all projects under the CDF – Green Initiatives Program are \$50,000. This amount will be reviewed on an annual basis.

In 2021, the ESC also reviewed and recommended three (3) funding applications to the Community Development Fund (CDF) Green Initiatives Stream, including:

- \$30,000 John Rhodes Heat Recovery Retrofit Project
- \$825 Summer Student Green Week Project. This included a 5-day series of sustainability events located at City Hall that included: Meatless Monday, Thrift Tuesday, Electronic Recycling Wednesday, Watershed Presentation and Bike to Work Week)
- \$2,120 Library Infrared Imaging Borrowing Program Project

Total annual funds available for all projects under the CDF – Green Initiatives Program in 2021 were \$50,000. The remaining \$17,055 of the funding in 2021 was allocated towards tree planting in 2022 as per a resolution on March 9, 2020. Some of the funds were allocated to go to purchasing trees to be planted in the City's new Plaza, as well as City parks.

City Joins United Nations Race to Zero Campaign

In November 2021, City Council approved the City to join the United Nations Cities Race to Zero campaign. The Race to Zero initiative is a program for cities by cities to inspire commitments and actions from their peers around the world and channel the best available tools and expertise to help them stay on track with the 1.5°C goal of the Paris Agreement. The City publicly acknowledged the global climate emergency and directed staff to report on steps that have been taken toward achieving their emissions reduction goals, including reporting on corporate emissions reduction progress annually under the Partners for Climate Protection (PCP) program.

City creates permanent Environmental Sustainability Position

On December 7, 2021 the City approved the 2022 Municipal Budget which included the creation of a full time permanent Sustainability Coordinator position at the City. The position will be responsible for implementation the GHG Reduction Plan and lead municipal efforts on energy and sustainability initiatives.

Initiation of a Climate Lens

On September 28, 2021, the Sustainability Coordinator conducted a presentation to the City's Senior Management Team (SMT) with the value proposition and examples of a climate lens policy created by other municipalities. A draft document has been developed which elaborates on this. It was reviewed by Legal and Procurement and review was ongoing, with an anticipated implementation of a climate impact statement for 2023 on City Council reports.

This concludes the overview of 2021 sustainability initiatives undertaken by the City. The following section of this report will review what took place in 2022 from a sustainability standpoint.

3. 2022 Sustainability Summary

An overview of key sustainability highlights from the City that took place in 2022 are listed below.

1. Buildings & Energy – Community

Understanding Solar Energy Webinar

In 2022, the City partnered with Garden River First Nation to co-host a webinar on solar energy. The webinar featured local solar experts who provided an overview on the benefits of solar energy and current/future opportunities, how to move forward with your own solar project, funding opportunities and a highlight on Garden River's solar energy leadership. To view a recording of the webinar, visit the City's [YouTube Channel](#).

Sault Ste. Marie selected for Ontario Clean Home Heating Initiative Pilot

In 2022, the Ontario government launched the Clean Home Heating Initiative, which brought hybrid heating to up to 1,000 households in St. Catherine's, London, Peterborough and Sault Ste. Marie. The City of Sault Ste. Marie worked with Enbridge to increase awareness about the program in Sault Ste. Marie through social media, online information sessions and updating the City's [energy incentives webpage](#). The Clean Home Heating Initiative will support the installation of electric heat pumps with smart controls. The hybrid heating system automatically switches to a home's existing natural gas furnace depending on weather and which fuel source is the least expensive. Program participants will receive a limited-time incentive of \$3,000 for an electric air source heat pump (ASHP) or \$4,500 a cold-climate air source heat pump (ccASHP). The program is being delivered by participating HVAC contractors in Sault Ste. Marie. They will guide homeowners through the process, confirm eligibility, and install the equipment and submit a rebate application to Enbridge Gas on your behalf.

Community Efficiency Financing Study Project

In 2022, the City of Sault Ste. Marie received funding from the Federation of Canadian Municipalities to develop a community retrofit feasibility study. The study will identify the opportunities and challenges that may arise during the development of a residential retrofit financing program for homeowners in the City of Sault Ste. Marie. It will examine the feasibility of implementing a financing program to address the high upfront cost burden of undertaking home energy retrofits and provide recommendations on the market potential, financing model and program delivery model. This study is expected to be completed in the Spring of 2023.

Home Energy Efficiency Financing Workshop

In 2022 the City received funding to develop a feasibility study on the possibility of creating a Sault Ste. Marie built home efficiency financing strategy. Residents were invited to a home retrofit financing workshop where they learned about the benefits of an energy efficient home and the City's goals to improve housing energy efficiency and reduce greenhouse gas emissions. Input was collected and will be used to develop the City's home retrofit financing feasibility study. To view a recording of the webinar, visit the City's [YouTube Channel](#).

Green Economy North Program expansion to Sault Ste. Marie

The City worked alongside rethink Green (an environmental non-profit) from Sudbury to bring awareness to their Green Economy North Program. The Green Economy North program is expanding to Sault Ste. Marie. It is Northern Ontario's only membership-based sustainable business program that guides members to reduce their carbon emissions through services such as carbon measurement and reporting, energy auditing and action planning. The first cohort is closing at the end of March and a second cohort will launch in the Fall. To learn more about the program [click here](#).

2. Buildings & Energy – Corporate

Broader Public Section Energy Report and Conservation and Demand Management Plans (O.Reg. 507/18)

The City of Sault Ste. Marie annual energy and emissions was submitted to the Province for July 1, 2022. All reports can be viewed on the City's webpage by [clicking here](#).

Corporate Energy Efficiency Prioritization

Energy efficiency is a core priority in the City's GHG Reduction Plan. In 2022, 21 retrofits were initiated and/or completed at City facilities, including a recommissioning project of the Ice Plant at the GFL. Many City buildings completed installation of LED lighting upgrades under the IESOs Small Business Lighting Program. Several others were also assessed for future energy efficiency projects. The following is a list of the projects that were either initiated and/ or completed.

Corporate Energy Retrofit Summary 2022

Line No.	Project	Status	Energy Reduction (kWh)	Annual Savings	Incentive / Grant	Funder	Emissions Reduction (tCO ₂ e)
1	Northern Community Centre	Complete	38,809.49	\$5,045.23	\$4,320.00	IESO	1.18
2	John Rhodes LED Lighting	Complete	150,692.00	\$22,362.00	\$13,200.00	IESO	3.82
3	Small Business Lighting (SBL) Projects (known to date)*	Work in Progress	121,423.21	\$14,930.64	\$49,416.24	IESO	2.40
4	Ice Plant Recommissioning (GFL)	Work in Progress	81,290.00	\$10,371.13	\$46,100.00	FCM	2.48
5	SSM Fire Services - RESC 65 Old Garden Road	Complete	2,006.66	\$260.87	\$700.00	IESO	0.06
6	16 x Small Business Lighting	Complete	90,704.61	\$10,887.78	\$30,719.51	IESO	2.31

	(SBL) Retrofits at City Facilities ¹						
Total		484,925.97	\$63,857.65	\$144,455.75			12.25

Eight (8) other projects were assessed and the City is waiting on the final numbers with plans to install in 2023.

GHG Reduction Pathway Grant Application

The City submitted an application to the Federation of Canadian Municipalities (FCM) Green Municipal Fund (GMF) GHG Reduction Pathway Feasibility Study program to seek funding to conduct deep energy retrofit audits at its six (6) top emitting facilities including: John Rhodes Community Centre, East End Wastewater Treatment Plant, GFL Memorial Gardens, Public Works Administration Building, Fire Hall 4 / RESC Centre, and Transit Administration Building. The audits (if successful in acquiring funding) will help determine the level of effort, resources and technologies to bring project facilities to a low carbon and energy use performance. Funding announcements are anticipated in late Spring and early summer of 2023.

Corporate GHG Inventory Update

Throughout 2022, the City gathered data and calculated its corporate GHG emissions update (2022, in comparison to 2017), per its United Nations Cities Race to Zero Pledge from 2021. Results were reported to council in early 2023.

3. Transportation

Transit Electrification Study Project

In 2022, the City of Sault Ste. Marie, along with twelve (12) other municipalities in Ontario started participating in a study that will develop information resources and implement a roadmap for the transition to electric buses. The study is being coordinated by Metrolinx Transit Procurement Initiative.

Active Transportation Master Plan

In 2022, the City of Sault Ste. Marie launched the active transportation master plan (ATMP) project. The plan will serve as a guiding document to inform future capital expenditures into pedestrian, cycling and recreational trails infrastructure. It will also provide guidance for the City's street policy, street plan and incorporate mountain biking opportunities, trail systems and ensure all are barrier free. Increasing active transportation is important for community health and wellness. It also contributes to reduced greenhouse gas emissions locally.

¹ SBL retrofits took place at: Landfill Admin Office & Scale House, Landfill Garage, Household Special, Waste Depot, Cemetery Garage, Cemetery Office, James Elliot Park Building, Strathclair Sports Complex, Soccer and Slow-pitch Building, Merrifield Skating Rink Building, Esposito Skating Rink Building, Bellevue Park Greenhouse, Bellevue Park Concessions & Washrooms, Pointe Des Chenes park building, Pointe Des Chenes Water Treatment Plant, Old Stone House, and the Greco Pool

Active Transportation Master Plan Webpage Update

In 2022, the City updated their active transportation [webpage](#). It now includes the health, environmental and economic benefits of active transportation. As well, it includes information on choosing a bike, safety, biking and transit, as well as biking resources in Sault Ste. Marie.

PUC launches Electric Vehicle (EV) Home Charger Rental Program

In 2022, the Sault Ste. Marie's PUC Services launched an EV Home Charger Rental Program. For \$35.00 / month, you can enjoy the convenience of charging worry free at home. PUC Services Inc. will conduct the installation as well as technical support, and the charger is fully warranted through them. To learn more about the program [click here](#).

Planning for Sault Ste. Marie – Parking Reform and Sustainable Development

In 2022, the City of Sault Ste. Marie's [Environmental Sustainability Committee](#), in partnership with the City's Planning Department, hosted a webinar featuring Brent Toderian, international planning consultant and Laura Flaherty, City of Kingston's Project Manager who discussed Kingston's zoning by-law regarding parking reform and how this relates to sustainable development and climate action. To view a recording of the webinar, visit the City's [YouTube Channel](#).

Community EV Charging Infrastructure Plan

In 2022, City Council directed staff to develop an EV charging infrastructure plan to be presented to council for consideration that will advance local policies to accelerate charging infrastructure in the community, and to include possible changes to local building codes to ensure electric vehicle readiness/inclusion in future commercial, industrial and residential development within the municipality of Sault Ste. Marie. Work is underway and is anticipated to be completed in 2023.

4. Waste

Single Use Plastics Ban

In 2022, City Council passed a resolution to create a single-use plastic ban. Staff developed a consultation plan, created consultation materials and consultations, summarized results, reported to council, supported by-law development and developed a [webpage](#) information page. The ban came into effect November 15th 2022 and includes: plastic checkout bags, plastic cutlery, plastic straws, and plastic foodservice ware. Plastic checkout bags were fully banned by November 15th 2022. Plastic Cutlery, Plastic Straws or Plastic Foodservice Water will be fully banned by February 8th 2023 Enforcement and fees will be applied and come into effect on August 8, 2023.

5. Green Space

Tree Planting with 2021 leftover Green Funds

In 2022, \$17,000 was allocated to tree planting from leftover funds from the Green Initiatives Fund from 2021. This resulted in the planting of approximately 100 trees around the city including: Downtown Plaza, 20 trees (to be planted once construction is finished), Anna Marinelli, 16 trees, New Pickleball Court site, 40 trees, and David Kyle Park, 20 trees

Earth Day Bioblitz

For Earth Day 2022, the City partnered with the Sault Ste. Marie Conservation Authority and the Kensington Conservancy to host a bioblitz. A bioblitz is a citizen science effort to record and identify plants and/or animal species within a designated area in a short period of time. The event took place April 22 – April 24, 2022, and the [iNaturalist](#) application was used to collect data. Participants were encouraged to get outside and take photos of any wild plant or animal that they encountered and upload it through the app on their smartphone or through the iNaturalist website on their computer. Three prizes, each valued at \$50, were distributed, including a zero-waste cleaning kit from Hearterra, a \$50 gift certificate from Great Lakes Outfitters, and a day hike survival kit. In addition, on Earth Day (April 22) a limited supply of reusable water bottles were available for community members to collect at City Hall, the Sault Ste. Marie Conservation Authority and The Kensington Conservation Centre. Prizes and giveaways were generously provided by the Sault Ste. Marie Region Conservation Authority and The Kensington Conservancy. Over 1,000 observations were submitted with 300+ species. To review the sightings, [click here](#).

Application to Natural Resource Canada (NRCan) 2 Billion Trees Fund

In 2022, the City submitted an application to the NRCan 2 Billion Trees Capacity Building stream valued at \$144,653. The project was for funding to conduct an urban tree canopy and land analysis study. The City was not successful in the grant application as the funding was oversubscribed. Feedback from NRCan was sought and the City is anticipating submitting a revised application once applications open up in 2023.

CityStudio Watershed Remediation Project

In 2022, students from Algoma University and Sault College developed a site assessment study for a watershed remediation project under the [CityStudio collaboration](#). The project assessed opportunities to remediate the Clarke Creek at Drake Street Park.

6. Economic Development

In 2022, the City's Economic Development team worked on exploring the opportunity of biomass uses in industrial settings for offsetting liquefied natural gas (LNG) use. They are also developing an expanded polystyrene (ESP) densification case study in collaboration with community stakeholders and Algoma University. They also explored opportunities for new clean energy generation, including hydrogen projects. These efforts are ongoing.

7. Municipal Leadership

Environmental Sustainability Committee

In 2022, the City's ESC received 11 project applications and allocated \$90,680.71 towards them. \$778.11 was allocated to a reserve. The following table summarizes the projects

Line No	Applicant	Project	\$ Approved	Status
1	YMCA	3 x Hydroponic Tower Gardens	\$4,051.05	Complete
2	BlueMar4Change	Shoreline Clean Up	\$4,929.73	Complete

3	City of SSM - Stormwater Art	12 catch basins painted to increase awareness about stormwater pollution	\$3,355.00	50% complete
4	Sault Ste. Marie Innovation Centre	Hydroponic installation at Harvest Algoma and information workshop	\$7,381.08	Complete
5	Invasive Species Centre	Land and aquatic invasive species workshop – included distribution of tree seedlings	\$2,640.40	Complete
6	City of SSM - Greco Pool	LED Lighting Retrofit	\$2,938.00	Complete
7	Downtown Association	Reusable bag and information card distribution	\$4,542.43	Complete
8	Conservation Authority	LED Lighting Retrofit	\$5,792.38	Complete
9	Clean North	Soil for community gardens & Rx Bottle Recycling initiative	\$3,662.44	Complete
10	Algoma Rod and Gun Club	LED Lighting Retrofit	\$1,388.20	Complete
11	City of SSM	Deep Energy Retrofit Audit	\$50,000.00	Pending
Total Allocated to Date			\$90,680.71	

A variety of community initiatives took place as a result of the Green Initiatives Fund. The following collage is an example of some of the great initiatives that took place. City staff look forward to seeing the use of funds expand for community sustainability initiatives in the years to come.

Figure 1: 2022 Green Initiatives Fund Community Project Photos²



² Photos supplied by the Environmental Sustainability Committee.

ESC Project Priorities Working Group Update

In 2022, the ESC formed a working group to prioritize active transportation, stormwater pollution awareness and increasing the breadth of projects to the Green Initiatives Fund. The following table summarizes the three projects and their status.

Line No.	Project	Status
1	<p>Task: Start an annual active transportation/commute survey/campaign to better determine and promote uptake year-round.</p> <p>Actions:</p> <ul style="list-style-type: none">• Survey drafted and shared with ATMP to be included in stakeholder engagement.• City's ATMP webpage updated.	COMPLETE
2	<p>Task: Hire an artist to paint selected street storm water gutters with a drawing saying “the St. Mary’s River (or the Ocean) starts here.”</p> <p>Actions</p> <ul style="list-style-type: none">• Application submitted by the City’s Manager of Recreation and Culture to seek funding to paint twelve (12) catch basins. 6 of the 12 paintings were completed in 2022. The remaining will be completed in 2023.	Phase 1 Complete. Phase 2 to complete in 2023
3	<p>Task: Add a pillar to the Green Initiatives Fund that allows for project applications that encourage healthy and resilient ecosystems, including habitat restoration.</p> <p>Action:</p> <ul style="list-style-type: none">• Working group revised terms of reference for the Green Initiatives fund to include healthy ecosystems, as well as active transportation and waste reduction.	COMPLETE

World Water Day 2022

For World Water Day 2022 (March 22), the City co-hosted a binational speaker series that brought together local Canadians and science personnel from Sault Michigan to speak about their work in water. A recording of the event is available to watch [here](#). A Mayoral Proclamation was also read by the Mayor Provenzano to encourage community participation in a variety of other World Water Day events taking place in the community.

This concludes the review of City sustainability initiatives that took place in 2022. The following section of this report will provide a high-level overview of planned 2023 sustainability initiatives to date.

4. City of Sault Ste. Marie 2023 Sustainability Priorities

Looking ahead to 2023, the City intends to work on further embedding sustainability into its operations and practices to improve its chances of meeting its GHG reduction targets (10% corporate and 5% community by 2050, as well as net zero by 2050), for which they are not on target to meet. From 2017 to 2022, the City's emissions have increased by 10%, led predominantly by emissions from fleet and equipment as well as natural gas consumption in City buildings. Efforts to reduce consumption and explore fuel switching technologies are essential to meet these targets, as well as mitigate the worst impacts of climate change. As part of an immediate remediation strategy, starting in 2023, a bi-annual corporate energy and sustainability meeting will be taking place with Department heads and key facility management staff to help prioritize and track emissions reduction projects

As well, effective January 30, 2023, the Council Report template has been amended to include a section to address climate impact for relevant reports. "STRATEGIC PLAN / POLICY IMPACT" has been revised to include Climate impact as "STRATEGIC PLAN / POLICY IMPACT / CLIMATE IMPACT." This new process will be monitored in 2023 to ensure it is being utilized as well as gathering feedback on how to improve its effectiveness.

In 2022, the City applied to the FCM Green Municipal Fund (GMF) GHG Reduction Pathway Feasibility Study program which would provide funding to complete deep energy retrofit (DER) audits on the City's top six (6) GHG emitting facilities: 1. John Rhodes Community Centre, 2. East End Wastewater Treatment Plant, 3. GFL Memorial Gardens, 4. Public Works Centre, 5. Fire Hall 4 / RESC Centre, and the 6. Transit Administration Garage. The City hopes to hear about whether they were successful in by Spring 2023. This type of work is crucial to provide the City with a roadmap on how to get to net zero emissions, including costs which will be important for budgetary planning.

Other key projects planned for 2023 include:

COMPLETE

- 2022 Corporate GHG Inventory Update
- First ever Climate Change impact statement applied to Council Reports
- Bi-annual senior management energy and sustainability project prioritization meeting (1st 2023 meeting completed February 28, 2023, next meeting scheduled for June 20, 2023)
- Energy Incentives Community Information Sessions (February 28 and April 11, 2023)
- World Water Day 2023 Community Presentation (March 22, 2023)
- CityNature Challenge (April 28 – May 1, 2023)

IN PROGRESS

- Complete Community Efficiency Financing Feasibility Study (ETA Spring 2023) next steps include applying for funding for Program Design
- Deep Energy Retrofit Project (pending funding)
- Community 2022 Emissions Inventory Update
- Nature Canada Bird Friendly City Designation Project
- 2023 Bike to Work Week (June 4 – 10) 2023 Bike to Work Week partnership with the Sault Cycling Club and Algoma Public Health (June 4 – 10)
- Support Algoma District School Board (ADSB) with launching annual stormwater pollution awareness initiative through Trout Unlimited Canada's Yellow Fish Road Program (June 5, 2023)




Appendix A: Sault Ste. Marie Community GHG Reduction Plan Implementation Progress

The Sault Ste. Marie Community GHG Reduction Plan focuses on actions to be completed within a 10-year timeframe: 2020 to 2030. It also lays some of the preliminary groundwork for net-zero emissions by 2050.

The plan recommends 60 actions and is broken down into seven key sectors, predominantly based on emission sources and reduction action opportunities. Actions are based on both community and corporate efforts. The sectors are as follows:

- | | |
|-----------------------------------|-------------------------|
| 1. Buildings & Energy – Community | 5. Green Space |
| 2. Buildings & Energy - Corporate | 6. Economic Development |
| 3. Transportation | 7. Municipal Leadership |
| 4. Waste | |

Actions within the plan have been broken down into separate timeframes including: Immediate: action to begin right away, Short Term (1-2 Years), Medium Term (3-5 Years), Long Term (5+ Years), and ongoing: action which has been initiated and will continue throughout the life of the plan. Each action includes leads and partners, as well as performance measures to help measure progress towards implementation. The following section of this report outlines action progress from 2020 to 2022 by section. The legend below denotes the icons used to illustrate the progress levels which are used to categorize action to date:

 Complete	 In progress	 Not started
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Most actions (50) have been initiated, 6 are completed and 5 have not started. The following section of this report summarizes efforts on plan implementation to date.

1. Buildings & Energy – Community

The building and energy section of the GHG Reduction plan accounts for actions to reduce emissions generated using electricity, natural gas, propane, and heating oil. When it comes to community actions, the plan focuses on energy efficiency. Other action areas in the GHG reduction plan include exploring the possibility of diversifying the energy supply (e.g. increasing renewable energy use on municipal buildings and in the community). The following outlines action to date in the Buildings & Energy – Community.

EDUCATION



Develop a webpage on the City's website as a source of information about the GHG Reduction plan and energy efficiency saving opportunities.

In December 2020, the City of Sault Ste. Marie created a [webpage](#) for the GHG Reduction Plan. This also includes a series of sub pages where residents and businesses can access information about [available energy incentive programs](#), [EV charging stations](#) in Sault Ste. Marie, information about how to be a [community energy champion](#) through the ECO School Canada Program and Student Energy for post-secondary students. There is also information about City Climate Change Adaptation [efforts](#) including the completion of climate change adaptation planning and risk assessment completed by the City in 2020. Other pages have been and will continue to be added

with more programming information as the City continues its efforts in encouraging climate mitigation and adaption.



Create a local 'Student Energy Chapter (at either Algoma University or Sault College).

City staff outreach has been conducted to both Sault College (Brian Anstess, Faculty Coordinator School of Natural Environment) and Algoma University (Aseel Hashim, Sustainable Development Youth Coordinator) about working with students to create a student energy chapter on campus. A pitch was provided to the Algoma University Sustainable Development Goal (SDG) Hub collaboration about this initiative and an invitation will be extended to the Sustainability Coordinator once they finalize their executive team. Current interest lies in initiatives for waste reduction.



Increase the number of local schools enrolled in the Eco Schools Canada Program (eco-certification program for K-12).

City staff outreach has been conducted to the Algoma District School Board (ADSB) regarding increasing uptick in the Eco Schools Canada Program. In 2020, Central Algoma Secondary School joined the program after a presentation by the Climate Change Coordinator at the ADSB Speakers Bureau. Preliminary outreach has been conducted with the Huron Superior Catholic District School Board.

REDUCE ENERGY CONSUMPTION AND OPTIMIZE ENERGY EFFICIENCY



- Increase uptake in residential and commercial energy efficiency retrofits that reduce the use of fossil fuels.
- Increase the number of new homes and businesses builds to incorporate energy efficient equipment (e.g. new furnaces, weather stripping, efficient lighting, etc.).
- Develop a Green Building Policy.

A variety of initiatives were undertaken by the City to encourage energy efficiency in the community. In particular, the City partnered with Garden River First Nation to deliver a four-part energy literacy webinar series from September – November 2021. Topics included understanding Ontario's energy sector, your home energy system and residential and commercial energy efficiency incentive programs for retrofits. All webinars were recorded and are available to watch on the City's [webpage](#). Over 300 views of the webinars have occurred to date and there were approximately 100 participants who attended the webinars. The City also engaged in a social media campaign entitled '5 Days of Energy Efficiency' which shared information about different energy efficiency programs and incentives available to businesses and residents in Sault Ste. Marie.

Furthermore, consultation with City Planning and Building departments determined that they currently do not record metrics on homes that are built above and beyond the Ontario building code as they review plans to ensure that all building code requirements are met, not exceeded. This has led to some research conducted by the Sustainability Coordinator to explore embodied carbon emission incentive programming. A presentation was made on December 14, 2021, at the City's Building Permit Open House about embodied carbon. Further research is underway and will be shared at the Building Departments Spring 2022 presentation to discuss any changes to the Ontario Building Code.



Develop a community energy efficiency retrofits program (either for energy efficiency retrofits or renewable energy).

Starting in July 2021, the City started conducting research into the Federation of Canadian Municipalities (FCM) Community Efficiency Financing (CEF) Initiative, which is a \$300 million fund to support municipalities and partner organizations to accelerate home energy projects. A motion was made at the September 9, 2021, Environmental Sustainability Committee recommending that the City apply to the funding. The PUC also provided a letter of support endorsing the initiative. This was furthered by Council approving the funding application on November 15, 2021. An application to the feasibility study funding was submitted to the FCM on December 16, 2021. The City received funding for the project in May 2022. It is anticipated that the final report will be completed in Spring 2023.



Develop a thermal imaging camera borrowing program in partnership with the Library.

On October 14, 2021, the Environmental Sustainability Committee (ESC) supported a request for funding from the Sault Ste. Marie Public Library to the Community Development Fund (CDF) Green Initiatives Program for \$2,120 to go towards the purchase of four (4) infrared imaging cameras to create a borrowing program. This was furthered by support from Council at their November 15, 2021, meeting. The library purchased the cameras in 2021. Thermal cameras offer both a valuable diagnostic tool and a compelling means of fostering engagement and educating homeowners on heat dynamics and can instill an appreciation for energy efficiency in homes. With the information gained by using the cameras homeowners will be able to make repairs to prevent/reduce heat loss which in turn will result in energy savings and reduce greenhouse gas emissions.

INDUSTRIAL / COMMERCIAL ENERGY EFFICIENCY



- ***Continue to consult with local industrial facilities to understand their current and planned energy efficiency and GHG reduction efforts.***
- ***Foster an environment that encourages new community energy projects to increase sustainable energy opportunities.***

The City has regular communication with industrial stakeholders in the community to understand their GHG reduction efforts. From 2021 to 2022, Tenaris and Algoma Steel sat on the City's Environmental Sustainability Committee (ESC) where regular dialogue is encouraged. Both were invited to participate in the 2022 ESC Spotlight Series where members were invited to share insights regarding what they do at their work as it relates to environmental sustainability. In addition, the City's Sustainability Coordinator has a quarterly touchpoint with Algoma Steel to stay up to date on their emissions reduction efforts and look for partnership and funding opportunities.

ALTERNATIVE ENERGY GENERATION



- ***Explore opportunities for increasing the use of solar photovoltaic (PV) electric net metering in Sault Ste. Marie.***
- ***Investigate the use of energy storage integration to move forward with balancing clean energy projects.***

The Economic Development team and the Sustainability Coordinator have engaged in conversations with the Ministry of Natural Resources and Forestry (MNRF) about ways to encourage the use of biomass as a form of alternative energy to reduce emissions. A review of the City's 2012 District Energy Feasibility Study is also underway as part of this, as it suggested using biomass as an energy source. They have also engaged in dialogue with the province regarding future opportunities associated to hydrogen.

2. Buildings and Energy – Corporate

Currently, corporate operations result in approximately 1% of community-wide emissions. While this number may seem low, the Municipality has a responsibility to lead and demonstrate practices that will encourage broader emission reduction within the community to achieve climate targets and positively impact sustainable economic development. The corporate GHG emissions inventory indicates an opportunity to achieve emission reductions by focusing on fleet and equipment as well as the corporate building stock. When it comes to corporate actions, similar to the community, a focus on energy efficiency projects is encouraged. This aligns with the City's *Third-party service review of municipal operations* which was presented to Council on January 6, 2020, which recommends pursuing and implementing energy efficiency projects. According to KPMG this has potential cost savings of up to \$100,000 annually (KPMG, 2019).

GREEN FINANCING



Develop a local improvement charge (LIC) by-law to allow clean energy improvement financing for new buildings/or upgrades, including green standards in Sault Ste. Marie.

An application to the feasibility study funding was submitted to the Federation of Canadian Municipalities (FCM) on December 16, 2021. If the City decides to pursue future funding to create a program design and implement a capital program, a by-law will need to be created.



Review and streamline the Municipal Environmental Initiatives (Green) Committee to oversee applications to the Green Initiatives Program under the Community Development Fund (CDF), and act as the overseeing body for the GHG reduction plan implementation.

In January 2021, the City transitioned the former Municipal Environmental Initiatives Committee (Green Committee) to be replaced by the Environmental Sustainability Committee (ESC). A total of 25 applicants applied. Over the course of 2021, the committee met eight (8) times and developed a set of environmental sustainability priorities for consideration by the City. These priorities are listed below.

1. Planning and Urban Design

- Centralize key infrastructure to ensure connectivity and densification.
- Prioritize affordability and accessibility when developing new public infrastructure.
- Conduct infrastructure improvements to make it convenient to encourage uptake in active and electric transportation (e.g. increase the number of bike racks and electric charging stations).
- Implement parking reform to encourage active transportation.
- Create a pedestrian friendly community and culture.

2. Green Space

- Decrease emissions from City lawn care through the electrification of maintenance equipment.
- Practice strong forest management and tree planting to use our urban forest as a carbon sink. Specifically, by conducting a study to determine carbon sequestration and storage from the urban forest. Consider exploring carbon credits as a form of revenue generation for the City's net zero plans.
- Conduct an urban tree canopy study to determine baseline tree cover and plan for future tree planting.
- Plant diverse native and non-invasive tree species that are more resilient to climate change as part of all future tree planting initiatives.

3. Built Environment

- Prioritize retrofitting existing buildings to address building vacancy across the city, especially in the downtown.
- Mandate that all new City buildings be low emission and carbon neutral.
- Use local energy sources (e.g. forest by-products such as biomass) and explore low carbon fuels such as hydrogen to reduce community energy and building emissions.
- Incorporate both low-carbon and carbon-storing materials in construction of new builds.

4. Investment

- Commit to investing in feasibility studies to support future projects in renewable energy, active transportation and energy efficiency.
- Groom Hub trail/sidewalk during winter to encourage active transportation.

The priorities have been shared with the Planning Department to be considered in the update to the Official Plan.

The ESC also reviewed and recommended three funding applications to the Community Development Fund (CDF) Green Initiatives Stream, including:

- \$30,000 John Rhodes Heat Recovery Retrofit
- \$825 Summer Student Green Week
- \$2,120 Library Infrared Imaging Borrowing Program

Total annual funds available for all projects under the CDF – Green Initiatives Program in 2021 was \$50,000. The remaining \$17,055 of the funding in 2021 was allocated towards tree planting in 2022 as per a resolution on March 9, 2020. Some of the funds went towards trees to be planted in the City's new Plaza, as well as City parks.

A new committee was appointed after the 2022 municipal election and their plans will be finalized in early 2023.

ENERGY EFFICIENCY



- ***Continue implementing energy efficiency retrofit projects identified in the IB Story Audits of 2010 and the 2019 Energy Conservation and Demand Management Plan (see Appendix 3 for a list of City retrofits).***
- ***Include wording in all requests for proposals (RFP) for capital projects to include applying for Ontario energy incentives.***

In August 2021, the Sustainability Coordinator organized three (3) energy opportunity facility walkthrough site visits with the IESO's Northern Ontario Energy Conservation Officer to conduct facility walkthroughs to look for energy efficiency opportunities at the Old Stone House, Landfill, and GFL Memorial Gardens. The landfill and the Old Stone House were recommended to participate in the Small Business Lighting program and the assessment of the GFL projected yearly lighting cost and maintenance savings was \$56,943.68 and included an estimate for a \$32,333 incentive from the Save on Energy program. It also has the potential to reduce facility GHGs by 12% (or 5.07 tCO₂e).

In September 2021, 19 site assessments of City facilities were conducted under the Small Business Lighting program which offers an incentive of up to \$2,000 in energy efficiency lighting upgrades. This has the potential to bring in \$38,000 of incentive money to the City and result in annual energy savings at a variety of smaller city sites. Actual energy savings and incentive will be confirmed once the projects are complete.

To ensure the City maximizes opportunities to take advantage of energy efficiency incentives, tender documents for the LED lighting upgrades to the John Rhodes Community Centre and the Northern Community Centre included wording in the RFP to ensure incentive compliance. In 2022, the incentives for these projects are estimated to be \$9,050.



- ***Take a portfolio approach to energy efficiency by establishing an implementation plan specifically for retrofits of existing buildings (if plans are dated or nonexistent, a revision of the audit should be done.***
- ***Ensure zero-emission technology is incorporated in regulations and public tenders.***

In 2022, the City submitted an application to the Federation of Canadian Municipalities (FCM) Green Municipal Fund (GMF) GHG Reduction Pathway Feasibility Study program to seek funding to conduct deep energy retrofit audits at its six (6) top emitting facilities including: John Rhodes Community Centre, East End Wastewater Treatment Plant, GFL Memorial Gardens, Public Works Administration Building, Fire Hall 4 / RESC Centre, and Transit Administration Building. The audits (if successful in acquiring funding) will help determine the level of effort, resources and technologies to bring project facilities to a low carbon and energy use performance. Funding announcements are anticipated in late Spring and early summer of 2023.

ENERGY MANAGEMENT



- ***Integrate sustainable energy technology and energy management practices across the municipality.***
- ***Integrate energy and climate considerations into the Asset Management Process.***
- ***Improve energy data tracking and use (e.g. utility meters and databases).***

The City is exploring the use energy tracking software and data management programs (e.g. Energy Star Portfolio Manager, RETScreen and Association of Municipalities of Ontario (AMO) Energy Planning Tool (EPT) Program). Outreach has also been conducted with the PUC and a process has been established to better obtain energy data tracking as part of the City's O.Reg 507/18 energy and emissions reporting. It is also important to note that in November 2021, the Ontario Government announced that in the next two years, Ontario electricity and natural gas utilities will be required to allow customers to download their natural gas and electricity data in a

standardized format under the Green Button standard. This access to energy data will provide the City with better information regarding energy consumption.

ALTERNATIVE ENERGY



- ***Commission a study to evaluate the business case for the deployment of hydrogen fuel cell applications as part of establishing a role for a low-carbon economy and community energy strategy.***
- ***Explore the feasibility of renewable energy procurement. (Note: the business case must be evaluated based on current renewable energy cost and effectiveness).***
- ***Increase the amount of solar power generation within municipal buildings and parking lots.***

In 2023, the City intends to explore incorporating renewable energy on the Transit Administration/ Garage building located on Huron Street.

3. Transportation

In the Sault Ste. Marie community, the GHG emissions inventory and the transportation sector includes emissions from the mobile combustion of gasoline and diesel and was broken down by on-road transportation and railway diesel. Most transportation emissions come from on-road transportation which is often one of the highest emitting sectors in Ontario due to the heavy reliance on personal vehicles with combustion engines. As well, according to the *Canadian Municipal Background* (an annual survey of mayors and councillors in more than 400 municipalities across Canada, 90% of Sault Ste. Marie residents commute to work by car, 5% walk, 4% use transit and 1% bike (Canadian Municipal Barometer, n.d.)). This presents ample opportunity to improve upon active transportation in Sault Ste. Marie.

ACTIVE TRANSPORTATION



- ***Increase education and awareness about the environmental, economic and health benefits related to active transportation.***
- ***Develop and maintain bike friendly infrastructure (e.g., bike lanes, trails and racks make cycling a safer, more attractive option for travel and commuting).***
- ***Initiate a commuter challenge (e.g., annual bike to work week or car-free day).***

Algoma Public Health has traditionally encouraged active transportation as part of its Public Health promotion work. Due to the COVID-19 pandemic, much of this work has been put on hold and planning restructuring will include encouraging active transportation benefits as part of its new mandate. Efforts to encourage this are picking up in 2023.

In 2021, the City's Summer Students organized a corporation wide bike to work week. It was poorly subscribed with very few City staff participating and it is recommended that in the future this initiative be coupled with other ones across the community to encourage uptake.

In 2022, the City launched their Active Transportation Master Plan and also updated their Active Transportation webpage.



- ***Encourage local companies to reward cyclists (e.g. develop a reward program for those who are bike friendly, such as a parking spot by the door covered from the rain.***
- ***Create an inventory of bike trails, including shortcut trails.***

INCREASE TRANSIT RIDERSHIP



- ***Improve transit options and non-motorized accessibility to major centers.***
- ***Create incentives for public transit use as a strategy to increase ridership.***
- ***Seek input from key bus users (e.g. seniors, students, commuters, etc.)***
- ***Educate the public on how to use bus routes (they will be more inclined to use them if they know how).***

Transit ridership decreased quite a bit significantly in early 2020 due to the onset of the COVID-19 pandemic. Since then, transit ridership has increased slightly, however it continues to fluctuate with changes to the status of the pandemic. The City does have incentives to encourage public transit use including a semester pass for university students, a senior and youth pass and a program with the District Social Services Administration Board (DSSMSSAB) for free ridership. The City has also expanded upon its on-demand transit and the development of a real time passenger app site and adventure bus program. Information is available on the City's [website](#) regarding roads and schedules.

The City has also created a series of partnerships with local community organizations such as the Algoma District School Board and Algoma University to encourage transit ridership. These efforts are ongoing.

ZERO-EMISSION TRANSPORTATION



- ***Support transportation electrification infrastructure opportunities (e.g. electric vehicles charging stations).***
- ***Transition to purchasing only vehicles that are highly efficient and run on zero-carbon and renewable energy fuels.***
- ***Support transportation electrification opportunities (e.g. electric vehicles, alternative energy vehicles, buses, etc.***

An electric vehicle (EV) produces approximately 94% fewer operational emissions than an internal combustion engine (ICE) vehicle. As well, converting two (2) existing diesel City buses to electric buses has the potential to reduce corporate baseline emissions by approximately 2%. Though EVs tend to be more expensive than ICE vehicles, there are a variety of existing incentives for both vehicles and infrastructure (e.g. Natural Resources Canada Zero Emission Vehicle Infrastructure Program) that can help municipalities with the capital costs of EV conversion. The City is working on moving towards electric buses. In 2022, the City of Sault Ste. Marie, along with twelve (12) other municipalities in Ontario started participating in a study that will develop information resources and implement a roadmap for the transition to electric buses. The study is being coordinated by Metrolinx Transit Procurement Initiative.

In addition, in February 2021, staff prepared a report to council responding to Councils resolution from March 9, 2020 regarding costs of purchasing electric vehicles. It resulted in a resolution to

acquire Battery Electric Vehicles (BEVs) for any new light-class vehicles that are acquired for the City fleet on a go forward basis.



- ***Develop and/or commission a community zero-emission vehicle strategy.***
- ***Update the Green Fleet Plan.***

In 2022, City Council directed staff to develop an EV charging infrastructure plan to be presented to council for consideration that will advance local policies to accelerate charging infrastructure in the community, and to include possible changes to local building codes to ensure electric vehicle readiness/inclusion in future commercial, industrial and residential development within the municipality of Sault Ste. Marie. Work is underway and is anticipated to be completed in 2023.

PLANNING



- ***Review potential actions that align with existing City Plans (e.g. Transportation Master Plan (2015), Green Fleet Plan (2011), and Cycling Master Plan (2007).***
- ***Encourage land use planning that reduces the distance people have to travel by car.***
- ***Active Transportation Master Plan.***

A fundamental objective of the new Official Plan will be to reduce the distances that people must travel by car. This is expected to be completed in 2023. As well at the end of 2021, the City hired a consultant to complete an Active Transportation Master Plan. The plan will take a holistic approach and include a series of recommendations. It will also serve as guidance for the city's street policy, street plan and incorporate mountain biking opportunities, trail systems and ensure all are barrier free. This is expected to be complete in 2023.

4. Waste

It is important for the City to continue, as well as increase their efforts to divert waste from the municipal landfill to reduce community emissions associated to solid waste.

EDUCATION



- ***Educate and engage residents and business about waste diversion.***

In April 2021, the City's Public Works Department worked in partnership with Clean North to create the City's Plastic Free Pledge. The campaign was designed to both educate and promote a lifestyle that is not reliant on single-use plastics. Households, businesses, schools, community organizations and workplaces were challenged to take the pledge. By taking part in this initiative, participants will make a pledge to audit their use of single-use plastics and set attainable goals to reduce and eliminate this waste by moving towards the use of eco-friendly alternatives. The reasoning behind the pledge was to get ahead of expected federal or provincial legislation banning single-use plastics. The pledge was not overly subscribed in its first year and staff have

been directed to creating a waste reduction strategy in alignment with the ban on single-use plastics.

WASTE DIVERSION



- ***Review strategies and policies that support ways to divert waste to extend the life of the landfill.***
- ***Encourage businesses and residents to reduce waste put into the landfill by using recyclables and reusable products.***
- ***Reduce the environmental impacts of City operations to demonstrate commitment and spur innovation (e.g. reducing or eliminating single use plastic products at facilities and events).***
- ***Explore organic waste diversion from the landfill.***

On November 15, 2022, the City implemented a single use plastics ban.

As well, changes were made to the Community Development and Enterprise Services (CD&ES) Department by purchasing packages to reduce single use packaging material. As well, the City's Biosolids Management Facility will accept municipal source separated organics as required by the Ontario Food and Organic Waste Policy by 2025.

WASTE TO ENERGY



- ***Expand landfill gas capture as part of landfill expansion plans and review feasibility of using the gas as a form of energy generation.***

5. Green Space

FOREST MANAGEMENT



- ***Manage City woodlands and street trees for the purpose of carbon offsetting, heat sinks and aesthetics.***

City forest management practices do not include the purpose of carbon offsetting and heat island mitigation via a policy. Currently, it is more of an understanding and best practice.



- ***Encourage the planting of native, and non-invasive tree species that are resilient to climate change and provide high levels of carbon sequestration.***

Under the Green Space pillar, the Environmental Sustainability Committee has recommended to the Planning Department that the Official Plan encourage the planting of diverse and non-invasive tree species that are more resilient to climate change.

PLANNING



- ***Develop an Urban Forest Management Plan, including an inventory of the tree canopy to understand Sault Ste. Marie's carbon sequestration potential.***

Over the course of 2021 the City worked with Algoma University on a few CityStudio projects. The Urban Forestry Plan and Tree Canopy Study Project involved two environmental science students who worked on developing some of the preliminary components that will ultimately contribute to an Urban Forestry Plan and Tree Canopy Study for the City. It is anticipated that this project will span across several semesters. Its first phase wrapped up in December 2021. The initial phase of the project included background research looking at urban forest management best practices in Cities of similar size and industry as Sault Ste. Marie, as well as some analysis using the iTree software tool (a free software developed by the US Forest Service research and development that quantifies ecosystem services and benefit values of community trees and forests at multiple scales). This included conducting an estimate of tree canopy coverage within the municipal boundary and reviewing the ecological benefits from an inventory of City park trees conducted previously. The students also completed an inventory of sample plot outside of the university which could be used to add to the City's tree inventory. City staff continue to look for funding to further this initiative.

ENVIRONMENTAL STEWARDSHIP



- ***Partner with local school boards (e.g. ADSB) to participate in an Environmental Stewardship activity with a focus on nature preservation (e.g. building a butterfly garden or hosting a community tree plant).***
- ***Encourage tree planting and preservation of natural areas a priority as part of community sustainability efforts.***

The City has contacted the Algoma District School Board (ADSB) regarding participating in the Yellow Fish Road program in 2023 (pending COVID-19 restrictions), in partnership with Trout Unlimited Canada. Participants will learn about the impact of pollution and what steps they can take to protect their local water by painting yellow fish near storm drains, as a reminder that anything entering a catch basin flows directly to nearby water sources, untreated. Students will paint yellow fish symbols with the words "Rainwater Only" and distribute fish-shaped brochures to educate households regarding water pollution prevention. The event will take place in the in a low traffic volume neighborhood with access to storm sewers for painting. Confirmation of this activity is still pending. Yellow Fish Road is a national storm water pollution prevention program that educates Canadians about their watersheds and what we can do to protect and keep water sources healthy for fish, wildlife and people.

6. Economic Development

SUSTAINABILITY



- ***Encourage local businesses to embrace sustainability.***

As previously mentioned, in 2021 and 2022, the City in partnership with Garden River First Nation launched an energy literacy webinar series. This included one webinar devoted to the commercial and industrial sector and offered insight on retrofit incentive programs. The City also has a list of energy incentive programs currently available for the commercial sector on their website.

In April 2021, Enbridge launched a solar PV program where they work directly with home builders to install solar panels as part of new home construction through a lease model. Enbridge installs the solar panels in an agreement with the builders. This is done as part of low carbon and net zero build developments. They will pay the up-front capital and work with builders throughout the

construction through a third party. When a home buyer buys a home, they are also signing a rental for the solar PV with Enbridge.

Enbridge will own and maintain the solar PV equipment for a period outlined in a solar agreement. At the end of the solar contract, they transfer the ownership back to the homeowner. The program takes away the up-front capital from the builder and the home buyer and stretches it out through monthly payments. The Sustainability Coordinator communicated this information to the Sault Ste. Marie Construction Association and the Sault Community Career Centre and at the Building Permit Open House to local building firms on December 14, 2021.

In 2022, the City worked alongside rethink Green (an environmental non-profit) from Sudbury to bring awareness to their Green Economy North Program. The Green Economy North program is expanding to Sault Ste. Marie. It is Northern Ontario's only membership-based sustainable business program that guides members to reduce their carbon emissions through services such as carbon measurement and reporting, energy auditing and action planning. The first cohort is closing at the end of March and a second cohort will launch in the Fall. To learn more about the program [click here](#).

LOCAL FOOD PRODUCTION



- ***Support local food production and consumption to reduce transportation emissions and costs of importing food to the community.***
- ***Expand opportunities and markets for Sault Ste. Marie locally grown products.***

The Sault Ste. Marie Innovation Centre's Rural Agriculture Innovation Network (RAIN) is working on a variety of programs that support local food production, such as their Advancing Northern Maple program which increases maple syrup production in Northern Ontario and the Tile Drainage program which benefits commodity and crop production. They have also supported food processing infrastructure, such as a new slaughterhouse being built in Bruce Mines. RAIN has also supported businesses in Algoma through the Sustainable New Agri-Food Products and Productivity (SNAPP) Program which supports Northern Ontario agriculture and food producers, businesses, collaborations, communities, and First Nations to create new products, enhance abilities for season extension, scale up production or enhance productivity.

The COVID-19 pandemic has also encouraged more people to shop local through a variety of campaigns such as the Shop Local campaign by the Sault Ste. Marie Chamber of Commerce. Locally and the Buy Algoma Marketing program. Both have encouraged local food purchasing within the Algoma region.

CLEAN MARKET GROWTH



- ***Encourage the development of a low-carbon economy in Sault Ste. Marie (e.g. develop a Smart Park that encourages energy efficiency, LEED building standards) to encourage clean-tech companies to relocate and/or expand in Sault Ste. Marie. Continue to work with local partners (private sector, indigenous groups and non-profits) to encourage clean growth opportunities.***

In 2021, the City's Economic Development team worked on exploring the opportunity of developing a hydrogen hub in Sault Ste. Marie as part of their collocation efforts for industries that require renewable power. They also explored opportunities for new clean energy generation, including biomass and are pursuing opportunities associated to electric vehicle and related technologies. These efforts are ongoing.

In addition, the Economic Development team and the Sustainability Coordinator have engaged in conversations with the Ministry of Natural Resources and Forestry (MNRF) about ways to encourage the use of biomass as a form of alternative energy to reduce emissions. A review of the City's 2012 District Energy Feasibility Study is also underway as part of this, as it suggested using biomass as an energy source. They have also engaged in dialogue with the province regarding future opportunities associated to hydrogen.

The Government of Canada will be setting up a new, federal agency focused on freshwater conservation and management – The Canada Water Agency. In June 2021 the City formed a Canada Water Agency Task force to lead the pitch on bringing the Canada Water Agency to Sault Ste. Marie. The work has been led by Kathleen Heymans, Manager of Business Development at the City and Dr. Elaine Ho-Tassone, Project Coordinator with the Lake Huron Collaborative. A series of community discussions have taken place over the year and will be summarized in a 'What We Heard' Report which will be included as part of the City's submission to the Federal Government for why the agency should be established in Sault Ste. Marie. Multiple stakeholders have been consulted and support has been acquired from community partners including First Nations and Industry. Next steps regarding this submission should be made available in 2023.

7. Municipal Leadership

HUMAN RESOURCES



- ***Assign and/or establish a position at the City to manage energy and sustainability initiatives, ensuring integration in all aspects of City operations and to act as a key municipal liaison towards community climate action.***
- ***Assign the newly established Environmental Sustainability Committee to oversee the implementation of the Sault Ste. Marie GHG Reduction Plan and climate change action across the community.***

On December 7, 2021 the City approved the 2022 Municipal Budget which included the creation of a full time permanent Sustainability Coordinator position at the City. The position will be responsible for the implementation the GHG Reduction Plan and lead municipal efforts on energy and sustainability initiatives.

On January 25, 2021, the City approved the establishment of the Environmental Sustainability Committee which has as a responsible to act as the overseeing body of the implementation of the GHG Reduction Plan.

FINANCING



Leverage climate investment opportunities from all levels of government and private sector to encourage research and development (R&D) opportunities for the community to be a test site for GHG reduction strategies.

Multiple grants have been pursued since 2019 that encourage energy savings and environmental sustainability.

OPERATIONS / LEGISLATION



- ***Introduce a 'Climate Lens' policy (evaluate and consider the climate impacts of all major City decisions, including financial decisions), to ensure City investments, policies and programs are supporting climate change goals.***
- ***Embed the GHG reduction plan into the Municipal and Community Planning Process.***

On September 28, 2021, the Sustainability Coordinator conducted a presentation to the City's Senior Management Team (SMT) with the value proposition and examples of a climate lens policy created by other municipalities. A draft document was reviewed by Legal and Procurement and then shared with the CAO for further feedback. A Climate Impact section was added to the City Council Report Template in January 2023.

The City is in the midst of finalizing the Official Plan (OP) update. As part of this project, the draft was reviewed by a third party (the Climate Risk Institute) from a Climate Lens. Some of the recommendations were incorporated in the final OP.



Draft bylaws and design infrastructure that encourage GHG mitigation at the citizen-level (e.g. discounted parking for electric vehicles)

This concludes the status overview of the GHG Reduction Plan Year implementation progress as of December 31, 2022.

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