

The Corporation of the Town of Milton

Report To:	Council	
From:	Kristene Scott, Commissioner, Community Services	
Date:	April 27, 2020	
Report No:	COMS-001-20	
Subject:	Climate Change – Corporate Initiatives and Update	
Recommendation:	That Council approve the proposed 2020 'Climate Change' work plan;	
	AND That staff be directed to create a 2021 work plan for Council approval prior to the 2021 budget deliberations;	
	AND That the Town commit to achieving the milestones set out in the Partners for Climate Protection PCP five-milestone framework as presented in Appendix B.	

EXECUTIVE SUMMARY

Council approved the Milton Green Innovation Plan ES 017-18) on September 24, 2018, which provides an overview of the municipality's current energy usage, GHG emissions and conservation programs. Following that, Council declared a 'Climate Emergency', and directed staff to undertake a number of actions including an annual update on Climate Change mitigation.

This report provides an overview of how the portfolio of Climate Change is currently managed, a list of 'green' initiatives the Town of Milton has completed or is in the process of completing, current gaps and opportunities and a proposed 2020 work plan.

REPORT

Background

There are many acronyms associated with climate change, energy management and associated agencies contained in this report.

Related Acronyms and Definitions

CDEMP	Conservation and Demand Energy Management Plan	Milton's first energy management plan (2013) in compliance with
		provincial legislation.



PCP	Partners for Climate Protection	National network of over 350
		municipalities focused on reducing
		GHGs and climate change.
	Federation of Canadian Municipalities	Managed by the FCM and ICLEI.
FCM	Federation of Canadian Municipalities	National voice with over 2000
		Canadian municipality members
		advocating federal policy and
	International Courseil for Local Environment	programs to benefit municipalities.
ICLEI	International Council for Local Environment	International organization of local,
	Initiatives	national and regional government
		organizations that have made a
		commitment to sustainable
		development. Also known as 'Local
		Governments for Sustainability'.
GIP	Milton Green Innovation Plan	Provides an overview of the
		municipality's energy usage,
		greenhouse gas emissions and
		conservation programs. The plan is
		comprised of (a Corporate Energy
		Plan (b) Community Energy Plan.
GHG	Greenhouse Gas	Gases, such as carbon dioxide in
		the atmosphere that trap heat from
НСС	Halton Climate Collective	the sun. The Halton Climate Collective
HUU	Haiton Climate Collective	
		HCC) is a group of local
		organizations focused on
		transforming Halton into a low-
		carbon, climate-resilient community.
		The Leadership Team of the HCC
		includes: Conservation Halton,
		Town of Oakville, Town of Halton
		Hills, City of Burlington, Town of
		Milton, Halton Region, Halton
		District School Board, Halton
		Catholic District School Board, and
		University of Waterloo.
EV	Electric Vehicle	Vehicle that uses electric motors for
		propulsion rather than an internal
		combustion engine that burns fossil
	Light Emitting Diada	fuel.
LED	Light Emitting Diode	An electric light source that uses
		less energy and lasts longer than
		traditional bulbs.



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LEED	Leadership in Energy and Environmental Design	Building rating system available for virtually all building types, LEED provides a framework for healthy, highly efficient, and cost-saving green buildings.
VOC	Volatile Organic Compounds	Compounds that easily become vapors or gases. VOCs are released from burning fuel such as gasoline, wood, coal, or natural gas.
RAP	Recycled Asphalt Program	Process where old asphalt removed during road reconstruction projects is ground into gravel and reused to form surface such as a parking lot.
LAS	Local Authority Service	Created by Association of Municipalities Ontario as a provider of competitively-priced and sustainable co-operative business services for Ontario municipalities and the broader public sector.

Over the last 20 years numerous initiatives have been completed based on specific strategies concerning energy, environment, education, planning and transportation, building a foundation of conservation and sustainability. The introduction of the Conservation and Demand Energy Management Plan CDEMP in 2013, provided a new tool concerning the management of energy and the environment.

In 2018, a legislated plan update resulted in the creation of the Milton Green Innovation Plan GIP which was developed by town staff in partnership with Milton Hydro and Union Gas. The plan is comprised of two documents (a) Corporate Energy Plan, and (b) Community Energy Plan. The GIP created a baseline review of energy usage and emissions from the town's assets and the community at large, and actions to increase conservation awareness and reduce emissions. The actions outlined in these two documents complement each other to achieve the goals of the Milton Green Innovation Plan.

While the scope and approach of the Corporate Energy Plan and the Community Energy Plan may differ, when combined under the umbrella of the Milton GIP, the ultimate goal is to establish a consistent vision, targets and actions to conserve and reduce emissions in the community.

On July 22, 2019, Council declared a "Climate Emergency" and Resolution 194-19 directed staff to undertake the following actions:

- **1.** To include a staff resource dedicated to Sustainability and Energy Management in the 2020 budget for Council consideration;
- **2.** Direct staff to inquire and provide council with a report as to long term potential cost benefits of transitioning Town's fleet to electric vehicles where possible;
- 3. That staff provide an annual update to Milton Council on climate change mitigation;
- **4.** That staff consider all opportunities to include language in future policy-planning work that acknowledges climate change;



5. That staff are directed to inquire and provide council a report as to what the Town of Milton can do to strongly encourage the development community to include EV charging stations in future medium to high-density application.

A subsequent Notice of Motion was made during the 2020 budget deliberations and Resolution 248-19 was passed and indicated "THAT consideration of a Sustainability and Energy Manager be deferred until 90 days following the appointment of the permanent CAO for the Town of Milton".

Discussion

Current Corporate Approach to GIP/Climate Change

The Halton CAO group (known as the Halton Climate Action Committee) is taking the lead on the climate change discussion to provide strategic leadership and policy direction for all municipalities in the Region. Milton also participates on the Halton Climate Collective HCC), which includes staff from Oakville, Burlington, Halton Hills, Halton District School Board, Halton Catholic District School Board, University of Waterloo and Halton Environmental Network with a focus of transforming the municipalities across Halton region into a low carbon climate resilient community.

Through the Strategic Management Team (SMT the Community Services Department provides oversight to the GIP and coordinates with other departments on climate change, sustainability and energy conservation initiatives. As resources permit, staff research and analyze opportunities to improve conservation where a business case supports the investment.

Building upon previous accomplishments, available capacity and focused coordination, the 2020 work plan will be completed with existing resources. Staff continue to take advantage of training and education opportunities that directly impact work programs and develop their ability to effect change as technology changes and new information becomes available. Research and initiation of additional environment, climate change mitigation and adaptation opportunities are subject to staff resources. Council may want to consider a dedicated staff position as part of future budgets depending on the desired expectations related to the current and future work plans in this area as issues and demands continue to evolve.



2020 Work Plan – Proposed

Initiative	Details	Timeline
 Become a member of the Partners for Climate Protection (PCP) 	 Commit to the 5 milestones identified by FCM (Details listed on Appendix 2 Create a GHG emissions inventory and forecast Set an emissions target Develop a Local Action Plan Implement the Local Action Plan Monitor progress and report the results All Halton municipalities have adopted this framework and have formalized it by becoming a member of PCP (no cost) by committing to completing the milestones within 10 years of joining the program. Staff recommend Milton also become a member of PCP and formally commit to the 5 milestones so that all municipalities are lock step in their efforts. Milton is well-positioned already based on what has already been completed and identified for the balance of 2020. Note - The GIP was developed using the FCM Partners for Climate Protection PCP) five step milestone framework. 	May
2. Launch the 'Environment' web page on the Town of Milton site	Create public awareness regarding Town activities and plans and provide educational material to residents.	June
3. Increase Public Engagement	 (a) Utilize the Let's Talk Milton platform as a portal to provide interested residents an opportunity to participate in conversation, ask questions and share information 	Summer
	(b) Host an Environment/Climate Change open house at Town Hall	Fall
	(c) Post town-supported environmental initiatives on the event calendar (i.e.: Good Neighbours Day	Ongoing
4. Corporate Initiatives	Continue implementation, coordination and pursuing opportunities consistent with work completed.	Ongoing



The Corporation of the Town of Milton

	Initiative	Details	Timelines
5.	Council Information	As per Council directive, provide a report about transitioning the Town's fleet to electric vehicles where possible.	Fall
6.	Council Information	As per Council directive, provide a report regarding what the Town of Milton can do to strongly encourage the development community to include EV charging stations in future medium to high- density applications.	Fall

The corporation encourages all staff to look at their work with a green lens and there are a number of initiatives have been completed or are in progress across the Town of Milton with climate change, sustainability and energy conservation in mind. Appendix 1 outlines the various corporate initiatives in this area. Initiatives have been bucketed under the headings of: Energy, Environment, Transportation, and Planning. These are easily understood and consistent with messaging from other municipalities, schools, etc.

2021 Work Plan

The Green Innovation Plan will continue to evolve as new technology and information becomes available. Staff will continue to work on the principles of the plan and formalize a 2021 work plan for this portfolio prior to budget deliberations that will include a list of action items, implementation plan/schedule and any funding or resource requirements.

Financial Impact

The work plan presented for 2020 can be accommodated within the Town's approved budget for the year. The financial implications associated with future initiatives will continue to be presented to Council at the time of approval and initiation.

Respectfully submitted,

Kristene Scott Commissioner, Community Services For questions, please contact:

Doug Sampano, Director - Phone: Ext. 2547 Recreation & Facilities

Attachments

Appendix 1. : Town of Milton – Corporate Environment / Climate Change Initiatives Appendix 2.: Partners for Climate Protection – 5 Step Milestone Framework

CAO Approval Andrew M. Siltala Chief Administrative Officer

Energy

Initiative	Location (if applicable)	Details/Benefits
1. EV charging stations	Mattamy National Cycling Centre (3)	Provides free charging facility to promote the use of electric vehicles.
2. Solar Installations in Town Facilities	 Milton Sports Centre 2 John Tonelli Sports Centre (1) FirstOntario Arts Centre Milton (1) Sherwood Community Centre (1), spring 2020 	Renewable electricity generation – approximately 1 million kwh annually.
 Promoting Leadership in Energy and Environmental Design LEED principles – Design & Construction 	 Sherwood Community Centre Mattamy National Cycling Centre Milton Sports Centre Expansion FirstOntario Arts Centre Milton Beaty Branch Library Town Hall Expansion 	Improved building performance over building code requirements. Use of long lasting sustainable building products. Consideration to reduce waste and recycling during the construction.
4. Facility LED conversions	Memorial ArenaMilton Sports Centre	Reduce energy consumption and labour costs and frequency of light changes.
5. LED street light conversions	• Milton	Light Emitting Diodes LED) lighting on municipal roadways provides an opportunity to introduce adaptive controls, reduce GHGs and realize savings over the lifespan of the equipment.
 Use of LED solar powered school zone flashers rural street lighting and pedestrian crossover signals. 	Milton	Reduce energy consumption and labour costs and frequency of light changes.

Initiative	Location (if applicable)	Details/Benefits
1. EV charging stations	Mattamy National Cycling Centre (3)	Provides free charging facility to promote the use of electric vehicles.
7. Geo thermal installation	Milton Sports CentreCivic Operations Centre	Capture, store, recycle heat and cooling.
8. Conversion from gas to electric - ice resurfacers	Sherwood Community CentreJohn Tonelli Sports Centre	Eliminates use of fossil fuel, cuts GHG production, improved indoor air quality.
9. Ice Controller Upgrades	Memorial ArenaJohn Tonelli Sports Centre	To improve efficiency and reduce run times.
10. Building Automation System upgrades	Milton Leisure CentreMilton Sports Centre	Control heating and cooling based on occupancy schedules.
11. Building envelope upgrades	 Nassagaweya Community Centre Beaty Branch Library Milton Leisure Centre 	Improves efficiency by reducing energy consumption- insulation, doors, windows, thermal barriers, sealants gaskets.
12. Annual Participation in Earth Hour	All facilities depending on programming	Worldwide symbolic gesture to draw attention to climate change.

Environment

1. Grey Water system	Milton Sports Centre	Collect and store rain water from roof for use in water closets.
2. Tree planting	Milton	Trees planted through a number of different programs, including new development, new park construction, park redevelopments and regular operating activities.
3. 2 Community Gardens	AllendaleSunny Mount Park	Joint project with Milton District Horticultural Society, provides gardening plots for residents.

Initiative	Location (if applicable)	Details/Benefits
4. Water bottle refill stations	 Mattamy National Cycling Centre Sherwood Community Centre FirstOntario Arts Centre Milton Milton Sports Centre John Tonelli Sports Centre Memorial Arena 	Fill stations counter number of water fills resulting in approximately 750,000 water bottles diverted from landfill.
5. Low flow water fixtures	All facilities	Water conservation.
6. Salt management program	Road operations and facilities	Based on actual weather monitoring and forecast, managed salt application to reduce ground contamination.
 Union Gas / Sunny Mount Park / Anne J. MacArthur P.S Tree Planting 	Between Sunny Mount Park and Anne J. MacArthur P.S.	Partnered with Union Gas, Conservation Halton and Anne J. MacArthur P.S. to plant over 300 trees.
8. Drumquin - Tree Planting / Creek Restoration Project	East of Drumquin Park in 16 Mile Creek Floodplain	Partnered with Conservation Halton to restore and plant hundreds of trees in floodplain after a weir removal.
9. Roper Drive – Tree Planting	Channel East of Roper Drive	Partner with Conservation Halton and TD Canada Trust TD Tree Days) to plant over 350 trees annually over the past 3 years in the "Roper Drive Channel".
10. Field and Stream Rescue Team – Clean Up Days	 Various Woodlots throughout Town 	Work with the Not For Profit "Field and Stream Rescue Team" and members of the community to do annual spring clean ups in various wooded areas throughout Milton.

Initiative	Location (if applicable)	Details/Benefits
 Leiterman Park SWM Pond – Tree Species and Stormwater Teaching Project – Boyne P.S. 	 Leiterman Park and SWM Pond 	Worked with teachers from Boyne P.S. Grade 4 class to provide two teaching tours about parks, tree species identification and stormwater management in their neighbourhood.
12. Earth Day Clean-up	 Conseil Scolaire Catholique MonAvenir Saint-Nicolas and surrounding Parks Woodward and Wilson area) 	Partnering with the principal and teachers at Saint-Nicolas E.S. to do a spring Earth Day clean-up of all surrounding parks (2020 initiative).
13. White roof technology (heat island effect	 FirstOntario Arts Centre Milton Mattamy National Cycling Centre 	White roofing material is used to reduce heat gain on building and rejection back to atmosphere.
14. Sustainable native planting	 Milton Leisure Centre Milton Sports Centre Beaty Branch Library 	Use of native drought hearty plant materials, eliminated need for irrigation to conserve water.
15. Recycling program	All facilities	Recycling bins and collection and at all facilities to reduce waste.
16. Green cleaning products	All facilities	Use of environmentally friendly cleaning products.
17. Use of "warm" asphalt	Road construction	Saves natural gas to heat product reducing GHGs.
18. Use of recycled granular materials – Granular A	Road construction	Made from crushing recycled concrete.
19. Use of Recycled Asphalt Pavement (RAP)	 Mattamy National Cycling Centre Shouldering in rural areas Trails 	Recycling used asphalt from road construction for a new use.

Initiative	Location (if applicable)	Details/Benefits
20. Intersection improvements	Road network	Signals/provision of turning lanes; efficient signal phasing and the provision of turning lanes improves traffic levels of service and reduces congestion and fuel, saving GHGs. Signals are actuated and do not run on fixed time, so there is no unnecessary queuing.
21. Durable pavement markings	Road network	Conserve materials and waste by reducing yearly remarking, also improving efficiency.
22. Water based pavement markings	Road network	Environmentally friendly products that save volatile organic compounds from the atmosphere.
23. Expanded asphalt program	Road network	Recycle materials on site and reduces transportation of materials saving GHGs and improving efficiency.
24. Pavement preservation	Road network	Initiatives like crack sealing, reclaimite application preserves pavements and reduces construction activity fuel saving GHGs.
25. Street sweeping recycling	Road network	Town staff collect sand from the roads, screen it and then store it over the summer months to reuse in the winter months. In 2018, crews collected just over 3,000 tonnes of street sweepings and were able to reuse 1,500 tonnes.

Initiative	Location (if applicable)	Details/Benefits
26. Eliminated printing Recreation Guide	Town wide	The recreation guide is now available online, eliminating the need to print over 600 000 pages annually.
27. Use of low VOC paints	All facilities	Environmentally friendly products that save volatile organic compounds from the atmosphere.

Transportation

1. Implementation of roundabouts	Town wide	Makes for safer intersections and saves fuel, reducing GHGs.
 Only implementing warranted 4 way stop intersections – 	Town wide	Saves fuel for drivers not having to brake and then accelerate, reducing GHGs
3. Anti-idling of municipal fleet	Fleet vehicles	Auto shut down is already in larger trucks, some pickups have auto shut down as standard equipment to reduce GHGs.
 Use of low rolling coefficient of resistance tires in Fleet 	Fleet vehicles	Appropriate size of tire in relation to vehicle and ensuring proper tire pressure to improve efficiency and save fuel.
5. Cycling and Trails connections	Town wide	Through subdivision and development processes, the provision of a connected trail network to provide an alternate transportation network.
6. Promotion of Cycling tourism	• Town wide	To promote alternative transportation and healthy and active lifestyle

Initiative	Location (if applicable)	Details/Benefits
7. Right sizing of fleet machinery	Fleet vehicles	Ensuring the appropriate vehicles for specific tasks to save fuel and reduce GHGs
8. Smart Commute	Town Hall	Promote carpooling with Town staff, 3 dedicated garage spots for staff who sign up for the program.
9. MIO Vision	Being introduced Town wide	Traffic signal activation based on demand load to ease congestion and reduce idling.

Planning

1. Corporate Energy plan	Town Facilities	5 year plan that reports on Town owned facilities energy profiles.
2. Community Energy Plan	Milton	Plan that provides an overview of energy consumption within the Town across all sectors.
3. Trails Cycling Master Plan	• Milton	Prove active transportation network for residents that allows for pedestrians and cyclists.
4. Encourage "green buildings"	Milton	Through site plan approval.
5. Policies supporting urban forestry;	Milton	Requirements for landscaping and street trees implemented through development applications.
6. Land use planning	Milton	Policy documents encourage and implement transit supportive development.
 Implementation of energy efficiency in new construction and renovations 	Milton	In accordance with Ontario Building Code.

Initiative	Location (if applicable)	Details/Benefits
8. Woodlot acquisition	• Milton	Through development, the town has acquired and maintains a number of urban woodlots in order to protect urban
		tree cover.
9. Urban Development Standards	Milton	Ensure compact and efficient built form, reducing the overall consumption of land
		and the unnecessary extension of roads and other infrastructure.

COMS-001-20 Appendix 2 Partners for Climate Protection - 5 Step Milestone Framework (FCM)

- I. **Create a GHG emissions inventory and forecast** helps track emissions and spending, gathers money-saving information and measures progress over time.
- II. Set an emissions reduction target sets the tone and direction for emission reduction efforts. Reduction targets vary across the Region, however PCP recommend setting a goal of a 20% reduction in corporate emissions over a ten year period and a 6% reduction in community emissions.
- III. **Develop a local action plan** outlines how the municipality will achieve its emissions reduction target through municipal operations and community-based initiatives.
- IV. Implement the Local Action Plan integration in to existing municipal plans and policies; linkage to future budgets; a clear implementation schedule and communication of progress helps ensure community support.
- V. **Monitor progress and report the results –** monitoring helps to determine whether initiatives are working and whether the target will be achieved. Reporting can connect with stakeholders and funders to solidify support for future initiatives