

# Conclusion: "Climate Change Report" to Council

**Editor's Note:** The first segment of Joanna Burris' mammoth report and presentation to council on climate change was published in the June issue. Her presentation was so large we intended to publish the conclusions in the July issue, however, we ran out of room.

The conclusion, which follows deals with the following topics: Emission Target Action, Implementation, Sources of funding, a history of sustainability in Colchester, actions required by administration and council. Other topics will include what will be required in each sector - buildings and grounds, fleet, streetlights, solid waste and renewable energy generation to achieve the required goals.

## Emissions Reduction Actions

Following are emissions reduction actions that the Municipality will aim to initiate, and in some cases complete, in the 2020/2021 fiscal year. They are organized by the previously mentioned sectors, plus a category for **Administration**, which includes general policy adoptions that do not fit into the other categories, and **Renewable Energy Generation**.

**Section 5** includes additional details regarding the implementation of these actions.

### Administration Cost Estimate:

Adopt a policy to incorporate GHG emissions and carbon footprint into Municipal purchases and RFPs. This could be an amendment to the existing procurement policy, or a new policy altogether, requiring Council and staff weigh the environmental impacts of different alternatives for all tenders, RFPs, and other municipal purchases and acquisitions.

Adopt a policy regarding workplace waste and emissions. This policy would address equipment shut-off in offices, as well as conference calling and waste separation - for example, requiring more compost bins throughout office buildings.

Adopt a policy requiring emissions offsets to be purchased for all air travel. Air travel is a significant cause of anthropogenic greenhouse gas emissions. Airplanes emit carbon dioxide and water vapour, both which linger in the atmosphere and have lasting warming effects. This policy would require all air travel for municipal purposes, by staff, Council, guest speakers, and others, to be offset through an official emissions offset organization. The policy could also encourage employees / Council to avoid air travel where possible - by making conference calls instead, for example, or participating in webinars. From the David

Suzuki Foundation: "A carbon offset is a credit for emissions reductions given to one party that can be sold to another party to compensate for its emissions." There are organizations that verify, certify, and monitor offset projects to give them credibility and to provide assurance to the investor, such as Gold Standard or Less.ca.

### Buildings & Grounds Cost Estimate:

Research a suitable green building standard (eg. LEED, Green Globes) and adopt policy to construct all new buildings to meet that standard. Colchester's Integrated Community Sustainability Plan had a strategy to construct all new buildings to LEED standard; however, today there are more suitable alternative standards to consider.

Allocate resources to facilities management, including prioritizing efficiency upgrades to municipal buildings and leased spaces. The Municipality owns 33 buildings with a collective assessed value over \$33m, excluding the RECC; however, the Municipality does not currently have a facilities manager to oversee these buildings and properties. As a result, some municipal buildings are in major need of repairs or upgrades and are much less efficient than they have the potential to be.

Explore opportunities to reduce heat loss at the MRF and the Balefill. For example, when the bays are open at the MRF to allow deliveries and sorting of incoming materials, the attached work areas are difficult and expensive to keep warm in the winter.

Replace all lights in the Courthouse and Public Works garage with LEDs. Lighting upgrades in municipal buildings are low-hanging fruit which have the potential for a high return on investment. Although lighting does not represent a significant portion of the Municipality's energy costs and emissions, upgraded lighting provides a better and safer workspace for employees and is relatively low-cost, with a short payback period.

Replace windows in the Courthouse to improve energy efficiency over the next 5 years. Many of the windows in the Courthouse are original to the building and are therefore over 100 years old. These windows are significant sources of heat loss in the winter, creating an uncomfortable work environment and an extremely inefficient heating system. Care must be taken when selecting and installing any windows in the Courthouse building, as it is a municipal heritage building, designated by the Town of Truro.

Install new, sheltered bike racks at the Courthouse, and investigate other appropriate locations. Providing sheltered bike racks may encourage more employees and visitors to the municipal facilities to consider cycling as a viable alternative. The existing bike rack at the Courthouse is unsuitable and in an inconvenient location; other facilities do not have bike racks at all.

Install Variable Frequency Drives and other efficiency equipment along with the new baler. The baler at the Balefill is scheduled to be replaced in 2021. Efficiency should be a consideration in the tender, and complementary efficiency equipment (such as VFDs) should be installed at the same time to minimize energy consumption.


*continued on page 9*

The following table groups the emissions reduction initiatives by type of project and includes details on the project lead, estimated cost, and timeline for each initiative.

Action #	Priorities	Project Lead	Estimated Cost / Resources Required	Targeted Completion
<b>Policies, Amendments &amp; Education:</b>				
1	GHG Emissions Procurement Policy			
2	Workplace Waste & Efficiency Policy			
3	Air Travel Emissions Offset Policy	Sustainability Planner	\$0 - Staff Time	1 yr.
11	Efficient Vehicle Procurement Policy			
12	Anti-idling Policy			
4	New Green Building Standard Policy			
18	Waste Educational Program	Waste Reduction Mgr.		
<b>Building Improvements:</b>				
8	Window Replacement (Courthouse)	Public Works	\$250,000* + Staff	1 to 5 yrs.
7	Light Replacement Program	Sustainability Planner	\$45,000 ** + Staff	Ongoing
6	MRF & Balefill Heat Loss	MRF Manager	\$5,000 + Staff	1 yr.
5	Facilities Management & Retrofits	Site Managers	\$50,000** + Staff	1 yr.
17	Efficiency Retrofits - Wastewater & Water Treatment Facilities	Public Works	\$50,000** + Staff	1+ yrs
22	Solar Installation - Tata Library	Sustainability Planner	\$30,000 + Staff	1 yr.
9	Sheltered Bike Racks	Recreation Manager	\$4,000*	1 yr.
<b>Equipment Improvements:</b>				
16	VFDs on Blowers (CCWWTF)	WW Treatment Mgr.	\$286,000* ** + ST	Ongoing
10	VFDs & Efficiency Equipment (Baler)	Solid Waste Manager	?? + Staff Time	1 yr.
14	Streetlight LED Replacement	Public Works	\$0 + Staff Time	Ongoing
<b>Feasibility Studies:</b>				
19	Solar Energy Study (CCWWTF)	WW Treatment Mgr.	\$5,000	1+ yrs.
21	Wood Waste Heating Study (Balefill)	Solid Waste Manager	\$10,000	1+ yrs.
15	Heat Exchange Study (CCWWTF)	WW Treatment Mgr.	\$20,000**	1+ yrs.
20	Large-Scale Renewable Feas. Study	Sustainability Planner	\$15,000**	2+ yrs.
13	EV Chargers Needs & Demand Study	Sustainability Planner	\$0 - Staff Time	1+ yrs.
<b>Funds already allocated</b>			<b>\$585,000</b>	
<b>New costs</b>			<b>\$185,000+</b>	
<b>Total</b>			<b>\$770,000+</b>	

\* Funds are presently held in Reserves.

\*\* Project qualifies for external funding (grants or rebates; note that other initiatives may be eligible for external funding)



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