Green Fleet Workshop

Thursday, March 5th , 2020

CLEAN AIR COUNCIL

a project of

Clean Air Partnership

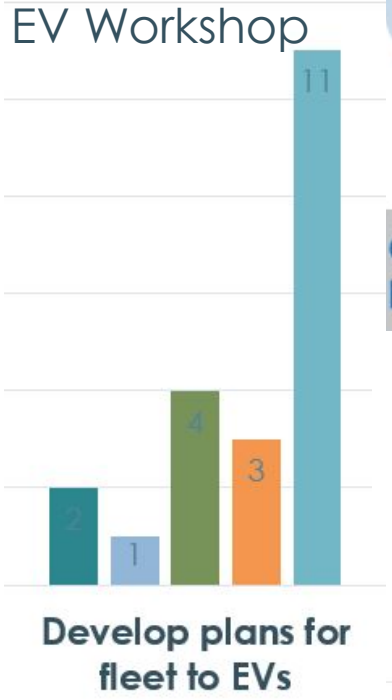
Clean Air Partnership

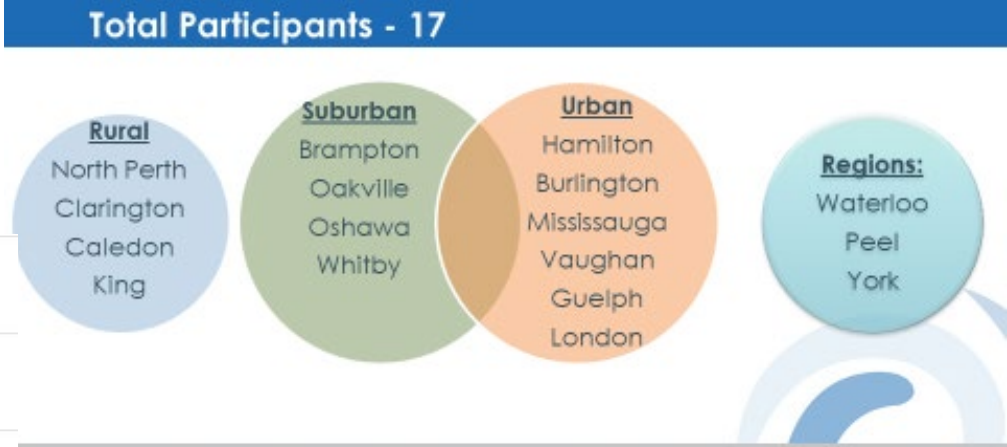
Why Green Fleet Workshop?

From Nov 8th , 2019, EV Workshop

Green Fleet Next Steps:

Establish a GTA Fleet Manager Group

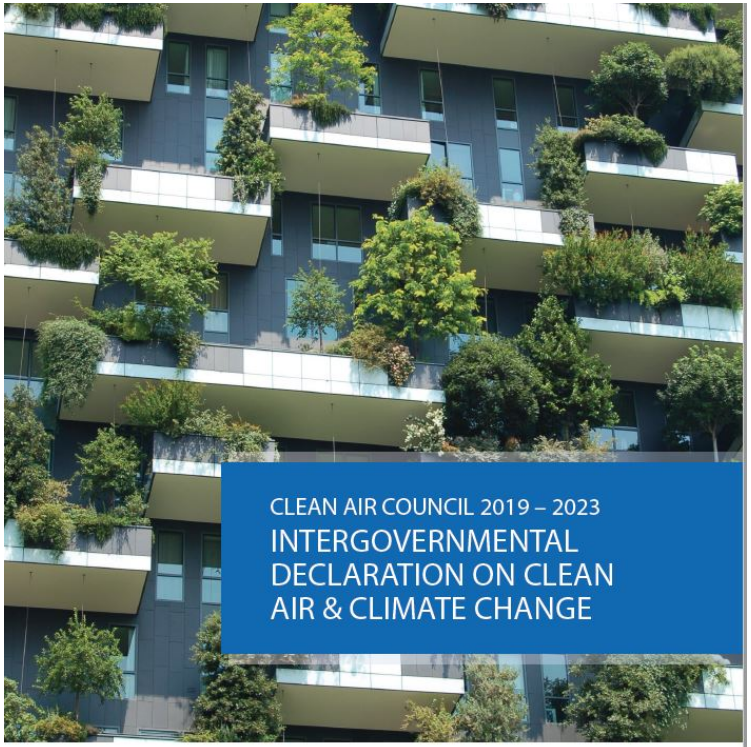




Q:How relevant would you rate the below actions based on their applicability to your municipality?

Very Relevant: Establish targets/develop plans for fleet conversion to EVs - (11/17)

2019 -2023 Intergovernmental Declaration on Clean Air & Climate Change



- Link

MUNICIPALITY	Active Transportation	Green Development Policies - Corporate	Green Development Policies - Community	Community GHG reduction targets	Community Energy Plans	Corporate Energy Plans	Corporate Green Energy Production	Community Climate Action Plan	Green Procurement Policies/ Procedures	Urban Forest Plans	Urban Infection Plans	Community Gardening Policies	Urban Agriculture Plans	Local Food Procurement Policies	Climate Change Adaptation/ Resilience Plans - Community	Climate Change Adaptation/ Resilience Plans - Corporate	Green Fleet Action Plan	Community Climate Change Actions/ Environment Funds
Ajax	Approved	Approved	In Development	Approved		Approved	Approved	Approved	Approved	Approved	Approved	Approved			Approved	Approved	Approved	
Aurora	In Development		In Development	In Development	In Development	Approved	Approved		In Development		Approved					In Development	In Development	
Brampton	Approved		Approved	Approved	In Development	Approved	Approved	Approved	In Development	In Development		Approved	In Development				Approved**	
Burlington	Approved**	Approved	Approved	Approved	Approved	Approved	Approved	Approved	Approved	Approved	Approved	Approved			In Development		Approved**	
Caledon	Approved	Approved**	Approved	Approved**	In Development	Approved	Approved	Approved	Approved	Approved		In Development		Approved	In Development	In Development	In Development	In Development
Clarington	In Development					Approved			In Development			Approved					In Development	
Durham Region	Approved	In Development		Approved	Approved	Approved	Approved	Approved	In Development						Approved	Approved		Approved
Guelph	Approved			Approved	Approved	Approved				Approved	Approved	Approved		Approved	In Development	In Development		
Halton Region	Approved	Approved		In Development	In Development	Approved**	Approved	Approved	Approved					Approved		In Development	Approved	
Halton Hills	Approved**	Approved**	Approved	Approved	Approved	Approved	Approved	Approved	Approved	In Development					In Development	In Development	In Development	Approved
Hamilton	Approved			Approved	In Development	Approved	Approved	Approved		In Development	Approved	Approved	Approved	In Development	In Development	In Development	Approved	
King	In Development	In Development	In Development	In Development	In Development	In Development	Approved	Approved	In Development						In Development	In Development	In Development	
London	Approved	Approved	In Development	Approved	Approved	Approved	Approved	Approved	Approved	Approved	Approved	Approved	Approved		In Development	In Development	In Development	Approved
Markham	Approved	Approved	In Development	Approved	Approved	Approved	Approved	Approved	Approved		Approved	Approved	Approved					Approved
Mississauga	Approved	Approved	Approved	Approved		Approved		Approved	Approved	Approved	Approved	Approved	In Development		Approved	Approved	In Development	
Newmarket	Approved			Approved	Approved	Approved	Approved	Approved	Approved	Approved	Approved	In Development	In Development	In Development	In Development	In Development		In Development

Goal of the workshop:

- Where it makes sense to work together?
- Where do you see the value of sharing resources?

Agenda:

Time	Item
10am	Workshop Goals and Introductions
10:15	Desi Stefanova, Clean Air Partnership, presenting the Green Fleet survey results and discussion
10:45	Prioritization/synergies/alignment exercise - Table discussion
11:15	Report back on from each table to state 1-3 areas of collaboration
12pm	Lunch
1 pm	Adam and Rebecca, Peel Region, Recap on workshop outcomes
1:30	Group discussion and next Steps
2 pm	Site Tour – only with folks with steel toe shoes

Green Fleet Survey Results

Clean Air Partnership

Municipality	Green Fleet Size	Vehicle types (e.g. light/medium/heavy) and typical operating lifespans
Burlington	700	Heavy, Medium and Light duty, tractors, mowers, ice resurfacers, Fire of transit, etc.
Caledon	93	63 heavy duty vehicles, recommended lifespan is 12-15 years; 5 light duty automobiles, recommended lifespan is 7-8 years; 14 light duty pick ups, vans, trucks, recommended lifespan is 11-12 years; 17 construction vehicles (grader, loader, etc.)
Durham Region	426	206 – 12m HD diesel buses, 12yr lifecycle; 30 – 8m MD diesel and gas cutaway buses, 7yr lifecycle; 5 - 6m LD gas vans, 5yr lifecycle; 19 - non-revenue LD gas vehicles, 5 – 12yr lifecycle (purpose based decision)
Hamilton	1450	Cars, light/medium/heavy duty trucks and equipment. Average age is 10 years. Individual vehicle classification lifespans vary from 6 years to 20 years. Fleet does not include Transit, Police, Fire, EMS

Municipality	Green Fleet Size	Vehicle types (e.g. light/medium/heavy) and typical operating lifespans
Oshawa	175	Average life span of 8-9 years
Peel Region	700 vehicles + 465 equipment	614 Light-Duty Vehicles; 38 Medium-Duty Vehicles; 58 Heavy-Duty Vehicles; 45 Heavy-Duty Equipment; 420 Standard Equipment
Toronto	10,000 + vehicles and equipment	4 weight classification categories: light duty, medium-duty, heavy-duty, off-road, and other vehicles
Vaughan	311	Light – 191; Medium – 99; Heavy - 21
York Region	560	5-10 (no longer 15 years)

Burlington

Goals:

Net carbon neutral for City Operations by 2040

Upcoming priorities:

To update the Green Fleet strategy in 2020 and implement an enhanced AVL system that will provide data to internal customers required to reduce GHG's

Burlington

Key Performance Indicators (KPIs):

- # vehicles and equipment procurements completed (Excluding minor equipment)
- # preventive maintenance services performed
- % Customer Satisfaction - Fleet Service
- Reduction in year over year Commercial Vehicle Operators Registration (CVOR) Safety Rating Percentage
- City fleet vehicle efficiency- Litres/100km (excluding transit bus)

Caledon

Goals:

- Fleet as a priority area within the Town's Corporate Greenhouse Gas Reduction Framework (2019 - 2024)
- Target to reduce emissions from the Town's vehicle fleet by 30% below 2017 levels by 2030
- One of the key strategies to meet this target will be for the Town to develop a Green Fleet Strategy (2020)

Caledon

Upcoming priorities:

- Developing Green Fleet Strategy this year -2020
- Work with a third party consultant on the development of the Strategy
- Ensuring outputs of the Green Fleet Strategy align with Caledon Fleet Standardization documents and contain Purchasing policies for staff moving forward
- Interested in looking into route optimization opportunities

Caledon

Key Performance Indicators (KPIs):

- GHG emissions reduction
- Number of low-carbon or electric vehicles/equipment
- Number of EV charging stations
- Number of staff trained
- Vehicle kilometers travelled reduced

Durham Region

Goals:

- Currently reviewing emission reduction opportunities through alternative fuels and electrification
- DRT will begin introducing hybrid fuel cell 12m buses into the fleet in 2020/2021 as an alternate propulsion to the 100% diesel fleet in place today
- Additionally, DRT is in the planning phase of an electric bus pilot project. A minimum of eight electric buses, charging infrastructure and possibly electricity storage units will be purchased for the 24-month pilot project to assist DRT in determining what extent of fully electric buses will be feasible to provide transit service

Durham Region

Upcoming priorities:

- Durham Region Transit is procuring eight electric buses in 2020 for on-road preliminary demonstration trials in 2021/2022. These buses are complemented with four fast charging stations at our transit depots
- Completed CNG/RNG Fleet & Facility Feasibility Assessment
- Alternative Fuels and Electrification opportunities reviewed during fleet replacement program
- Infrastructure review for alternative fuels and electrification
- Fleet utilization assessment

Hamilton

Upcoming priorities:

- Develop Green Fleet Policy
- Evaluating replacement of waste collection vehicle to CNG
- Evaluate options for electrification and other alternatively powered vehicles

Oshawa

Goal:

Develop several strategies. Introducing propane autogas as an alternate fuel, and have identified the City's first vehicle to be replaced with a full EV in the Fire Services department

Peel Region

Goals and Initiatives:

- Implementing the Green Fleet Strategy
- Completed Peel's Fleet GHG Emissions Inventory and Target Reductions
- Automatic Vehicle Location (AVL)
- Battery Electric Vehicles – 19 units
- E85 higher blend of ethanol in gasoline (pilot project)
- Hybrid Ambulance Pilot
- Anti-Idle Campaign and PW Challenge

15 Initial Strategy Actions identified in 5 categories:

- Resourcing
- Fleet Monitoring and Data Analysis
- Alternative and Renewable Fuel Research and Transitioning
- Procurement, Green Vehicle Specifications and Vehicle Selection Hierarchy
- Stakeholder Engagement, Education and
- Outreach, and Fleet Operational Best Practices

Toronto

Goals and Initiatives:

- **The pathway of sustainable city of Toronto fleets**
- Transition 45% of City-owned fleet to low-carbon vehicles by 2030
- 65% greenhouse gas reduction by 2030 (from 1990 levels)
- Net zero greenhouse gas emissions by 2050, or sooner

Vaughan

Goal:

Update and implement the “Green Fleet Strategy” to optimize fleet use and vehicle type, identify fuel switching for low carbon mobility and minimize environmental impacts

Vaughan

Upcoming priorities:

- Complete baseline (instrumentation) and municipal benchmarking or jurisdictional scan (best practices)
- Evaluation of options to optimize fleet use, reduce fuel consumption and reduce GHG emissions
- Proposed strategy approved by Council and integrated into budgets
- Acquisition and maintenance underway and tracked as part of Corporate Asset Management. Progress tracked by existing departmental performance measures, including vehicle asset type and fleet fuel use

Whitby

Goal: Developing strategic fleet master plan, addressing items such as:

- Electric/alternate fuels for reduction in carbon emissions and proposed applications where they may be suitable, infrastructure required to support changes, benefits to the environment and any additional costs/ grants associated

- Autonomous vehicles and proposed applications where future autonomous vehicles may be suitable, while providing relevant information on any potential benefits and/or potential liabilities for the Town

- Staffing challenges relating to the changing technologies, different classes of licenses required and types of support staff required working together with the expected vehicle technology changes and highlighting any challenges the Town may experience

York Region

Goals

Non-Transit Fleet Greenhouse Gas Emissions Targets

Year Ended	2020	2025	2030	2051
Emissions Target (tones of carbon dioxide equivalent):	13,700	14,900	15,200	9,000
Change from 2014 Baseline	<1%	+9%	+11%	-34%

York Region

Upcoming Priorities:

- Electric Vehicle Strategy
- Vehicle Right-Sizing
- Anti-Idling Policy
- Driver Training Programs
- Fleet Route Planning
- Active and Sustainable Transportation Options
- Enabling Actions

Prioritization/synergies/alignment exercise

Using a ready list/menu of actions(located on your table), the goal is to identify 1-3 areas/actions to work on together/collaboratively

Report back verbally. Each Table writes down 1 area of collaboration on the empty list/flip chart

During lunch pick which area is suitable for your municipality. Write the municipality name under the area of collaboration

Action Category	Initiatives
Collaboration	Establish a GTA Fleet Manager Group • Stakeholder list • Who else?

	Creating a communications plan
	• Sharing data, resources, and experience:
	  o Financial returns, environmental results, alternative fuel pilot projects
	  o Fleet related business cases, policies, KPIs, RFP templates

	Exploration of Joint Procurement opportunities/issues/funding streams
	Joint Training Opportunities • Driver efficiency training • Preventative maintenance program • Having competition and award - achieve gold status • Idling reduction strategy • Fuel-efficient driving practices
	Joint Outreach Campaigns • Community Challenge • Idle-free programs
	Others:

Action Category	Initiatives
Planning	Measuring fleet GHG emissions
	Fleets Vehicle Classification & Count
	Alternative Fuel research & transitioning
	Setting a short-term GHG emission target from the fleet
	Evaluates the green fleet programs cost-effectiveness and ability to meet the short-term targets
	Setting long-term targets
	Develop a life-cycle business case
	Adopting the continued use of alternative fuels and new technology
	Establish a reporting mechanism for fleet managements • Indicators that can be tracked to monitor progress
	Others:
Acquisition	Resolution to purchase hybrids/smart cars/ EV
	Full cost accounting procurement o Incorporates life-cycle cost, current emission standards, consideration of alternative technologies as part of purchasing RFP process
	"Right-Sizing" vehicles
	Electric Ice Resurfacer
	Others:

Action Category	Initiatives
Operational Efficiency Opportunities	The use of energy recovery mechanism (regenerative braking) Retrofits with catalytic converter
	Use of Biodiesel, Ethanol Blends, Hydrogen Fuel other alternative fuels • Feasibility Pilot projects
	Automated Fuel Management and Dispensing System & Automatic Vehicle Location (AVL) • Tracking fuel consumption • Behaviour changes
Others	

Goal of the workshop: (recap)

- Where it makes sense to work together?

  - Identified municipality working collaboratively on # areas

- Where do you see the value of sharing resources?

Sharing Resources

Guides.co

CAC Low Carbon Transportation Hub (EV Strategies)

LINK

- Easy to access & share
- In-real and over time changes
- Easy to make comments and get feedback

Next Steps

- What is needed to move forward?
- Call-inn /webinars or workshops– how often?
- Rotating meetings – having workshops in different jurisdictions (east, north, west) – who are the potential next hosts?