TORONTO

STAFF REPORT
INFORMATION ONLY

Green Fleet Plan 2008-2011 Interim Update 1

Date:	September 3, 2008
To:	Government Management Committee
From:	Chief Corporate Officer
Wards:	All
Reference Number:	P:\2008\Internal Services\Fleet\Gm08004Fleet - (AFS 7128)

SUMMARY

This report provides the first interim update on the Green Fleet Plan 2008-2011, adopted by Council in March 2008. Led by Fleet Services Division, the plan sets out the measures that the City will take to reduce fuel use and emissions of greenhouse gases and smog pollutants from the Divisions' vehicles. This report provides an update on four areas of the plan: 1) lifecycle impacts of hybrid vehicles, 2) environmental implications of biofuels, 3) electric, low-speed vehicles and 4) an idle-reduction pilot project. These updates were requested by Council and Government Management Committee.

Financial Impact

This report will have no financial impact beyond what has already been approved in the current year's budget.

DECISION HISTORY

The City's Green Fleet Plan 2008-2011 (GM12.6) was unanimously adopted by Council at its meeting March 3-4, 2008.
http://www.toronto.ca/legdocs/mmis/2008/cc/decisions/2008-03-03-cc17-dd.pdf
At that time requests were made for follow-up including:

1) Lifecycle impacts of hybrid-electric vehicles
Council recommendation #43: "The Chief Corporate Officer... report to Government Management Committee on the life cycle impact of the proposed hybrid vehicles to conventional vehicles";

2) Environmental implications of biofuels

Council recommendation #44: “The Chief Corporate Officer... report to Government Management Committee on the environmental impact of ethanol and/or as well as the economic impact on the cost of food products”. This is consistent with Green Fleet Plan action #8 that is also addressed in this report: Fleet Services will, “evaluate biofuels to determine which products and feedstocks provide the greatest environmental benefits on a life-cycle basis, and the environmental impact of converting forests and food-producing land to growing crops for fuel”;

3) Electric, low-speed vehicles
Council recommendation #45: “City Council encourage the Provincial government to allow low-speed electric vehicles on City streets, on a pilot basis”; and

4) Pilot project to reduce idling
Feb. 2008 Government Management decision advice #2: “Design a pilot project to be tested on a number of City vehicles to control idling”, and report.

This report responds to these requests.

ISSUE BACKGROUND

Fleet Services Division is implementing Toronto’s Green Fleet Plan 2008-2011 for the vehicles and fuels used by the City’s Divisions:
http://www.toronto.ca/fleet/gfp_08_11.htm
This report provides an interim update on the first six months of implementation.

COMMENTS

The Green Fleet Plan 2008-2011 outlines the measures that Toronto will take to reduce fuel use, fuel costs and emissions of greenhouse gases and smog pollutants from the Divisions’ vehicles. It was adopted unanimously by Council in March 2008.

Fleet Services Division is now implementing many of the elements of the plan. For instance, Fleet Services has increased the number of green vehicles in the fleet from 283 at the end of 2007 to 351 today, including those that were added and sold. As of August, the City has purchased 78 green vehicles in 2008 plus has three experimental vehicles on loan for testing. The City is on track to exceed its commitment to add 80 new green vehicles to the fleet in 2008.

This report provides an update on the following four initiatives:

Lifecycle impacts of hybrid-electric vehicles

As requested by Council, this report outlines the lifecycle impacts of hybrid-electric vehicles compared to conventional vehicles. Hybrid vehicles have an internal combustion engine that burns fuel and an electric motor powered by a large battery. The focus here is on the primary difference between them, the additional hybrid battery. Environmental impacts (lifecycle emissions of carbon dioxide, CO_2) and financial impacts (cost to purchase, operate and maintain) are addressed here.

Environmental impacts

Hybrid-electric vehicles are growing in popularity because driving them consumes less fuel than driving a conventional vehicle. In turn this reduces fuel costs and emissions of greenhouse gases and smog pollutants. Appendix 1 compares gasoline consumption and greenhouse gas emissions for commercially available hybrid vehicles and their conventional counterparts. According to Natural Resources Canada, driving a hybrid car, light truck or SUV reduces greenhouse gas emissions by approximately one third compared to a conventional vehicle (NRCan 2008).

To understand the lifecycle environmental benefits and impacts of hybrid vs. conventional vehicles, Canadian scientists have examined the emissions from all stages of the vehicle's life: resource extraction, manufacture, shipping, driving, maintenance and disposal. As noted above, hybrid vehicles emit substantially less greenhouse gas when they are driven (reduction of 32 per cent CO_2 and 34 per cent methane). However, manufacturing, assembling and transporting a hybrid vehicle emits slightly more greenhouse gas than a conventional vehicle, including the shipping of materials (increase of 6 per cent CO_2 and 10 per cent methane). Overall, hybrid-electric vehicles emit less greenhouse gas than conventional vehicles over their entire lifecycles (22 per cent less CO_2 and 31 % less methane, NRCan 2008).

Concern has been expressed at Council that manufacturing hybrid-electric batteries overseas and shipping them to Canada may cause high emissions of greenhouse gases from the hybrid lifecycle. In fact, the emissions from shipping materials and components for hybrid production are a very small part of the lifecycle greenhouse emissions ((S&T)^2 Consultants Inc. 2005).

Conventional vehicles generally use lead-acid batteries. Most hybrid vehicles currently use nickel metal hydride (NiMH) batteries, and lithium-ion batteries are expected to be used increasingly in future. When comparing battery types, a European study found that per unit of energy produced, NiMH batteries have a slightly lower environmental impact than lead-acid batteries, and lithium-ion batteries have a substantially lower impact (Matheys et al. 2007). The lifecycle of lithium-ion batteries emits less greenhouse gas than that of a NiMH battery (Schexnayder et al. 2001). This indicates that emissions from manufacturing hybrid vehicles may decrease as hybrid vehicle manufacturers switch to lithium-ion batteries.

Recycling programs are currently in place for conventional lead-acid batteries. As NiMH batteries near the end of their 8-10 year lifecycle, there is a need to ensure that effective recycling programs exist. The majority of the City of Toronto's hybrid vehicles to date were manufactured by Honda, Toyota and Ford. Honda and Toyota have indicated that hybrid batteries are disassembled and the components and materials are remanufactured into new metals and products. Ford has indicated that hybrid batteries are returned to the manufacturer or delivered to a hazardous waste depot for disposal in accordance with local regulations.

Financial impacts

Over their five-year lifetime with the City of Toronto, hybrid-electric vehicles save money compared to conventional vehicles. This assessment considers purchase cost, fuel savings and maintenance costs.

Purchasing a hybrid vehicle can cost more or less than a conventional vehicle, depending on what vehicle is being replaced. When the City purchases a hybrid car to replace a conventional sedan, there is a $400-$2,000 price premium after government rebates depending on the models (2008 pricing). When the City purchases a small, hybrid SUV to replace a conventional crew-cab pick-up truck the City saves up to $14,000 on the purchase.

The City purchases hybrid vehicles because they reduce fuel consumption. Over its five year life (2008-2012), a hybrid car is estimated to save almost $5,000 in fuel costs compared to the conventional sedan it would replace in the City's fleet (2008 models). A small, hybrid SUV is estimated to save approximately $7,500 compared to the conventional crew-cab pick-up it would replace in the City's fleet. It is estimated that the City's current inventory of hybrid vehicles will save approximately $600,000 in fuel costs over the next five years.

Combining purchase cost and fuel savings, over their five-year life with the City one hybrid car and one small, hybrid SUV are estimated to save approximately $4,000 and $21,000 respectively, compared to a conventional sedan and crew-cab pick-up.

The City's maintenance costs for hybrid cars are lower than or equal to those for conventional cars. When the City started purchasing hybrid cars it stopped purchasing conventional cars, making direct comparisons for each year difficult. The City's maintenance costs for 2006 model-year hybrid cars are lower than those for 2005 and 2004 model-year conventional cars, as would be expected for newer vehicles. This analysis is based on the most recent data available (2007) for preventative maintenance and non-preventative maintenance (repair) costs.

The hybrid pick-ups and SUVs in the City's fleet have overall lower maintenance costs than conventional pick-up trucks. In 2004 and 2006, to conserve fuel the City started replacing conventional pick-up trucks with experimental hybrid pick-ups and small, hybrid SUVs, respectively. The City's maintenance costs for 2007 model-year hybrid SUVs and conventional pick-up trucks are equal. Maintenance costs for 2006 hybrid pick-ups are lower than those for conventional pick-ups, and costs for hybrid SUVS are even lower. For the 2004 model year, maintenance costs for hybrid pick-ups are again lower than those for conventional pick-up trucks.

Based on the City's experience, hybrid vehicles provide lifecycle environmental and financial benefits compared to conventional vehicles.

Environmental implications of biofuels

As required by Council and the Green Fleet Plan, this report summarizes the environmental benefits and impacts of biofuels (ethanol and biodiesel), including land-use change and the impact on world food prices. Biofuels include ethanol and biodiesel which are gasoline and diesel fuel replacements, respectively. As is standard practice, the focus here is on lifecycle emissions of greenhouse gases from the various fuels and feedstocks, i.e. well-to-wheel emissions of carbon dioxide (CO_2). This report gives an overview of the best information currently available from peer-reviewed scientific literature and governmental publications.

Studying the lifecycle CO_2 impacts of biofuels is a new science. A debate over the environmental benefits and impacts of biofuels continues to rage among scientific experts (Attachment 2; Crutzen et al. 2008, Fargione et al. 2008, Lindemann & Glover 2008, $(S\&T)^2$ Consultants Inc. 2008, Searchinger et al. 2008, UN FAO 2008a, Adler et al. 2007, Blottnitz & Curran 2007, OECD 2007, Delucchi 2006, IFEU 2004). Some scientists conclude that biofuels substantially reduce lifecycle CO_2 emissions compared to conventional gasoline and diesel, and some conclude that biofuels are of limited benefit or cause CO_2 emissions to actually increase, particularly when land-use change is considered.

Given the continued debate among experts, it is too soon to unequivocally conclude which transportation fuels, biofuels and feedstocks are the best for the environment. Fleet Services will continue to monitor the issue. Once scientists have had more time to accurately determine the lifecycle benefits and impacts of biofuels, Fleet Services will report back to Council.

The study of biofuels' impact on world food prices is also a new area of research, but there appears to be more consensus in this area (OECD 2008, UN FAO 2008b, USDA 2008, World Bank 2008, OECD-FAO 2007). Experts generally conclude that biofuels are one of many factors contributing to higher world food prices, but are not the dominant factor. Other factors include: the increased cost of petroleum (which drives up the cost of farming, processing and transporting food); growth in world population and income (which generates demand for certain food crops); increased meat consumption and adverse weather in major grain-producing countries.

To eliminate the impact of biofuels on food prices and availability, governments and companies are testing and demonstrating "second-generation" biofuels. These are manufactured using waste products and materials that do not compete for food-producing land. Examples are cellulosic ethanol made from the fibrous materials of plants rather than the seeds or oils, and biodiesel made from used fryer grease. These technologies are advancing rapidly, for instance one Ontario manufacturer has the capacity to produce 2.5 million litres of cellulosic ethanol per year, currently for demonstration purposes only. Fleet Services Division is monitoring development of these second-generation biofuels and will test these products as they become available.

The City of Toronto currently operates four cleaner-fuels programs, two of which include biofuels. In 2008 Toronto is using E10 (ten per cent ethanol from corn in gasoline), which is higher than the provincial requirement of E5. In 2008 the City is using B5 (five per cent biodiesel from soy in diesel fuel) in the winter, B20 in the summer and B10 in the shoulder seasons. These programs were initiated based on the dominant scientific opinion at the time that biofuels reduce lifecycle emissions of CO_2 compared to conventional gasoline and diesel fuel. Fleet Services will continue to investigate the environmental and societal implications of biofuels, seek sustainable non-food biofuel feedstocks and re-evaluate its biofuel program as new information becomes available.

Electric, low-speed vehicles

Low-speed, all-electric vehicles are currently being manufactured in Ontario but are not permitted on the province's public roads. While the vehicles meet safety standards for their category (low-speed vehicles) they do not meet federal safety standards for on-road vehicles. Recently the Province of Quebec and areas of British Columbia have permitted the use of electric, low-speed vehicles on roads with low speed limits.

In the Green Fleet Plan 2008-2011, the City indicated its desire to evaluate electric, low-speed vehicles, and to pilot test other full-electric vehicles and recharging station technologies in partnership with the Toronto Atmospheric Fund and the Toronto Parking Authority. In its decision on the Green Fleet Plan, Council encouraged "the Provincial government to allow low-speed electric vehicles on City streets, on a pilot basis". The Province's response on this issue is included as Attachment 3. Fleet Services will investigate the feasibility of pilot testing electric, low-speed vehicles in City parks as permitted by the Province of Ontario.

Pilot project to reduce idling

The City is addressing idling in several ways. In June 2007, the City adopted the Idle-Free policy. It requires staff to shut their vehicle off if idling for more than ten seconds. The policy applies to City vehicles and is supported by a staff education campaign and Idle-Free driver training.

In addition the City is addressing idling using best available technology in all sectors of its fleet: cars, light trucks and heavy trucks. To address idling in cars, the City purchases hybrid vehicles or ultra-fuel-efficient cars when cars become due for replacement. Hybrid vehicles automatically shut off when the car comes to a stop and automatically restart when the driver touches the gas pedal, which eliminates idling. The City of Toronto Divisions operate approximately 160 cars (as of Dec. 31, 2007). Seventy-one of these are now hybrid and 25 are ultra-fuel-efficient models. In total the hybrids and ultra-fuel efficient models make up 60 per cent of cars. The entire stock of cars will be hybrid or ultra-fuel-efficient models in the near future, which will address idling emissions from this group of vehicles.

Fleet Services has several approaches to address idling in the City's 1,530 light trucks (pick-up trucks and small vans). Hybrid pick-up trucks are not currently commercially available. To eliminate idling from pick-ups, the City has replaced 34 large, crew-cab

pick-up trucks with more fuel-efficient, hybrid, small SUVs that shut off when they come to a stop and eliminate idling. In 2004 and 2005 the City acquired 27 experimental, light-hybrid pick-up trucks. This model is no longer available. When full hybrid-electric pick-up trucks become commercially available in the next year, Fleet Services will use these vehicles to further reduce idling by pick-up trucks.

To reduce idling from our existing fleet of conventional pick-up trucks, Fleet Services has met with numerous suppliers and tested multiple idle-monitoring devices. There are challenges in finding a device that meets operational requirements to monitor and/or limit idling on many different vehicle models, and properly address idling in heavy city traffic. Fleet Services is currently testing a device that shuts the vehicle down if it is left idling and records how much idling is taking place.

The cost to apply this device to the non-hybrid light trucks in the fleet would be approximately $300 per vehicle. There are currently approximately 1,470 non-hybrid light trucks in the fleet. As noted above, some of these will be replaced with full hybrid pick-ups and hybrid, small SUVs in the near future. Of the remaining conventional pick-ups, the 2007 and newer models (approximately 50-100 units) would be candidates to receive the device. New replacement pick-up trucks could also be installed with the device. If the test of the device is successful, Fleet Services will report to Council in the March 2009 Green Fleet Plan update to request authorization to apply the device across these fleet vehicles.

To address idling in the City's 850 heavy-duty trucks, Fleet Services has designed a three-part idle-reduction pilot project that involves monitoring and reducing idling. Many heavy trucks have on-board computers that record the time spent idling. As part one of the pilot project, Fleet Services is in the process of downloading historical idling data from each of the City's heavy trucks, where technically feasible. The information will be shared with the Divisions operating those vehicles. This will allow the Divisions to do targeted enforcement of the Idle-Free policy and work with Fleet Services to identify idle-reduction equipment and practices.

Many heavy trucks can also be programmed to limit idling. As part two of the pilot project Fleet Services is setting heavy truck computers to shut down the engine if the truck idles longer than three minutes, and the power take-off is not in use. Since the heavy trucks can be programmed to restrict and monitor idling, costly equipment and air time do not need to be purchased to address these vehicles.

In part three of the pilot, Fleet Services is setting speed limiters in heavy trucks to a maximum of 95 km/h, in keeping with a new Provincial legislation. This initiative will not address idling but will help ensure safety and conserve fuel.

The work setting up the heavy truck pilot project (downloading idling data, setting idle parameters and setting speed limiters) will be completed in late 2008.

The City is addressing idling in all sectors of the fleet by promoting the Idle-Free policy, sharing idle monitoring results with Divisions and shutting down idling trucks. These efforts reduce fuel waste and fuel costs as well as reducing emissions of greenhouse gases and smog pollutants.

Fleet Services and the City's other Divisions are making strides in implementing the Green Fleet Plan 2008-2011. Further implementation details, including fuel savings achieved, will be reported to Government Management Committee in March 2009.

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SIGNATURE

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Bruce Bowes, P. Eng.,
Chief Corporate Officer

ATTACHMENTS

Attachment 1: Lifecycle environmental impacts of hybrid-electric vehicles – supplementary information

Attachment 2: Environmental implications of biofuels – references

Attachment 3: Letter from the Province of Ontario regarding electric, low-speed vehicles (dated July 23, 2008, to the Director of Toronto Fleet Services)

Attachment 1

Lifecycle environmental impacts of hybrid-electric vehicles – supplementary information

Hybrid fuel consumption data

Table 1. Fuel consumption and annual CO_2 emissions for Canadian 2008 conventional and hybrid light-duty gasoline vehicles

Vehicle model	Fuel consumption		CO_2 emissions per year*
	L/100 km (% change)		kg/yr (% change)
	City	Highway	
Honda Civic	8.2	5.7	3408
Honda Civic Hybrid	4.7 (-43%)	4.3 (-25%)	2160 (-37%)
Nissan Altima	8.9	6.3	3696
Nissan Altima Hybrid	5.6 (-37%)	5.9 (-6%)	2784 (-25%)
Toyota Camry	9.5	6.2	3840
Toyota Camry Hybrid	5.7 (-40%)	5.7 (-8%)	2736 (-29%)
Chevrolet Malibu	9.6	6.5	3936
Chevrolet Malibu Hybrid	8.5 (-11%)	6.2 (-5%)	3600 (-9%)
Saturn Aura	9.6	6.5	3936
Saturn Aura Hybrid	8.5 (-11%)	6.2 (-5%)	3600 (-9%)
Toyota Prius (Hybrid)	4.0	4.2	1968
Ford Escape	10.3	7.7	4368
Ford Escape Hybrid	5.7 (-45%)	6.7 (-13%)	2928 (-33%)
Ford Escape AWD	10.9	8.5	4704
Ford Escape AWD Hybrid	6.8 (-38%)	7.3 (-14%)	3360 (-29%)
Saturn Vue	11.0	7.5	4512
Saturn Vue Hybrid	8.2 (-25%)	6.1 (-19%)	3504 (-22%)
Toyota Highlander 4WD	12.3	8.8	5184
Toyota Highlander 4WD Hybrid	7.4 (-40%)	8.0 (-9%)	3696 (-29%)
Chevrolet Tahoe	14.7	9.8	6000
Chevrolet Tahoe Hybrid	9.8 (-33%)	9.2 (-6%)	4560 (-24%)

(Table 1 continued)

Vehicle model	Fuel consumption		CO_2 emissions per year*
	L/100 km (% change)		kg/yr (% change)
	City	Highway	
Chevrolet Tahoe 4x4 FFV	15.4	10.4	6288
Chevrolet Tahoe 4x4 Hybrid	10.5 (-32%)	9.8 (6%)	4896 (-22%)
GMC Yukon	14.7	9.8	6000
GMC Yukon Hybrid	9.8 (-33%)	9.2 (-6%)	4560 (-24%)
GMC Yukon 4X4 FFV	15.4	10.4	6288
GMC Yukon 4X4 Hybrid	10.5 (-32%)	9.8 (6%)	4896 (-22%)

* CO_2 emissions per year are estimated by NRCan based on annual driving distance of 20,000 km with 55% city driving and 45% highway driving.
Source: Office of Energy Efficiency, Natural Resources Canada (NRCan). Fuel Consumption Guide 2008.
http://oee.nrcan.gc.ca/transportation/tools/fuelratings/fuel-consumption-guide-2008.pdf

References for lifecycle impacts of hybrid-electric vehicles

Matheys J., et al. (2007). Influence of functional unit on the life cycle assessment of traction batteries. International Journal of LCA. Vol. 12, No. 3, pp. 191–196.

Natural Resources Canada. (2008). GHGenius model version 3.12b.

Schexnayder, S. M. et al. (2001). Environmental evaluation of new generation vehicles and vehicle components. Report prepared for the US Department of Energy.

(S&T)^2 Consultants Inc. (2005). Documentation for Natural Resources Canada's GHGENIUS Model 3.0. Prepared for NRCan Office of Energy Efficiency.

Attachment 2

Environmental implications of biofuels – references

Adler, P. R., Del Grosso, S. J., and W. J. Parton. (2007). Life-cycle assessment of net greenhouse-gas bioenergy cropping systems. Ecological Applications. Vol. 17, No. 3, pp. 675-691.

Blottnitz, H., and M. A. Curran. (2007). A review of assessments conducted on bio-ethanol as a transportation fuel from a net energy, greenhouse gas, and environmental life cycle perspective. Journal of Cleaner Production. Vol. 15, no. 7, pp. 607-619.

Crutzen, P. J., Mosier, A. R., Smith, A. K., and W. Winiwarter. (2008). N2O release from agro-biofuel production negates global warming reduction by replacing fossil fuels. Atmospheric Chemistry and Physics. Vol. 8, No. 2, pp. 389-395.

Delucchi, M., A. (2006). Lifecycle Analyses of Biofuels Draft Report. Institute of Transportation Studies, University of California, Davis.

Fargione, J., Hill, J., Tilman, D., Polasky, S. and P. Hawthorne. (2008). Land clearing and the biofuel carbon debt. Science. Vol. 319, No. 5867, pp. 1235-1238.

Institute for Energy and Environmental Research (IFEU). (2004). CO2 Mitigation through Biofuels in the Transport Sector: Status and Perspectives.

Lindemann, W. C. and C. R. Glover. (2008). Nitrogen Fixation by Legumes. New Mexico State University: College of Agriculture and Home Economics.

OECD. (2008). The Impact of Biofuels on Global Agricultural Markets. Presentation by Loek Boonekamp, Head of the Agrifood Trade and Markets Division Directorate for Trade and Agriculture, at the DG Trade Chief Economist Seminar. Brussels, 25 January 2008.

OECD-FAO. (2007). OECD-FAO Agricultural Outlook 2007-2016.

Organisation for Economic Co-operation and Development (OECD). (2007). General Secretariat. Sept. 11-12 2007 Round Table on Sustainable Development. "Biofuels: Is The Cure Worse than the Disease? Richard Doornbosch and Ronald Steenblik. Paris.

Searchinger, T., Heimlich, R.,. Houghton, R. A., Fengxia Dong, Amani Elobeid, Jacinto Fabiosa, Simla Tokgoz, Dermot Hayes, Tun-Hsiang Yu. (2008). Science. Vol. 319, No. 1238, pp. 1238-1240.

$(S\&T)^2$ Consultants Inc., Cheminfo Services Inc., MacLean, H., Fugacity Technology Consulting. (2008). Sensitivity Analysis of Biodiesel LCA Models to Determine Assumptions with the Greatest Influence on Outputs.

UN FAO. (2008a). State of Food and Agriculture 2008. Bioenergy: Can it Fuel a Rural Renaissance? Wiebe, K.

UN FAO. (2008b). Soaring Food Prices: Facts, Perspectives, Impacts and Actions Required. (High Level Conference on World Food Security: The Challenges of Climate Change and Bioenergy.) Rome, 3-5 June 2008.

United States Department of Agriculture (USDA). (2008). Global Agricultural Supply and Demand: Factors Contributing to the Recent Increase in Food Commodity Prices.

World Bank. (2008). Rising Food Prices: Policy Options and World Bank Response. Note prepared by PREM, ARD and DEC and distributed for information as background to the discussion of recent market developments at the World Bank Development Committee meeting.

Attachment 3

Letter from the Province of Ontario regarding electric, low-speed vehicles

Ministry of Transportation / Ministère des Transports

Ontario

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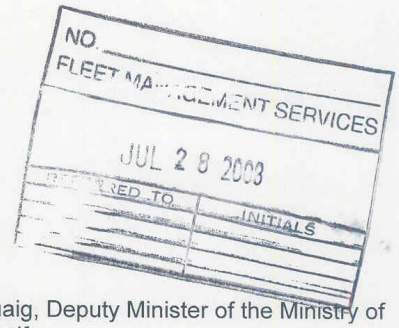
July 23, 2008



Gerry Pietschmann
Director
City of Toronto
Fleet Services
843 Eastern Avenue
Toronto, Ontario
M4L 1A2

Dear Mr. Pietschmann:

Thank you for your letter of April 30, 2008 to Bruce McCuaig, Deputy Minister of the Ministry of Transportation. I have been asked to respond on his behalf.

The ministry gratefully acknowledges receipt of your Green Fleet Plan 2008-2011. It is an accomplished, progressive and ambitious document.

The ministry recognizes the need for municipalities to move towards implementing a modern, efficient vehicle fleet that enable cost and service efficiencies in municipal fleets and contribute to our collective air quality, emission reduction and asset management objectives.

The ministry concurs with the need to partner with others to provide more sustainable transportation options and has done so on a number of fronts such as: *ReNew Ontario*, *Move Ontario 2020*, forwarding gas tax funding to municipalities, and the retail tax rebate on hybrid and alternative fuel vehicles.

The purpose of the Green Commercial Vehicle Project is to make green vehicles more affordable to business owners. Historically, it has been more difficult to have this kind of change take place in the private sector. The exclusion of municipal vehicles were to provide a reasonable scope for this project. It is hoped that it will raise awareness and make the business case for take-up across a broad range of Ontario businesses.

There are other initiatives that are underway at the Ministry of Transportation to address municipal interests. The Fleet Challenge Ontario project, recently completed, involved working with municipalities to enhance fuel efficiency and environmental performance. In addition, the Transit Procurement Initiative could help reduce the costs of purchasing transit vehicles, including alternative fuelled vehicles.

With regard to allowing (electric) low-speed vehicles (LSVs) on Ontario's city streets, the province is a strong supporter of initiatives that expand mobility options for Ontarians, improve air quality, and promote green technologies. Currently, LSVs are part of a five-year pilot program that began in September 2006, in Ontario's provincial and municipal parks and conservation areas to see how safely these vehicles can operate in a controlled environment. We welcome the City of Toronto to participate in the pilot by incorporating LSVs into the fleets that service their parks. There will be an evaluation before the end of the pilot to assess how safely LSVs interact with other road users.

We are also a strong advocate for safe vehicles. Motor vehicle collisions are a leading cause of death and injury in this province. In fact, the social cost of motor vehicle collisions in Ontario is $17.9 billion annually. Full-size electric passenger cars are legal for operation on Ontario's roads if they meet federal standards for a passenger car and equipment requirements under the Highway Traffic Act. Not many full-sized electric vehicles are being produced, but there are a few on our roads. These vehicles are plated and registered as passenger cars. All passenger cars, whether gas or electric powered, must meet 40 federally-mandated standards for lights, brakes, windshield, occupant protection, bumpers, etc. Many of these standards are required to protect vehicle occupants in the event of a crash. LSVs on the other hand, are only required to meet 3 federally-mandated vehicle safety standards.

On December 20, 2007, Transport Canada posted a notice in the Canada Gazette about LSVs for public comment. Transport Canada has proposed an amendment to the federal definition of LSV to clarify that the LSV class was created to meet transportation needs in controlled areas such as college campuses, gated communities, military bases and other places where LSVs would not share the roads with larger and faster motor vehicles. More information is available on Transport Canada's "Low-speed vehicle information sheet" at http://www.tc.gc.ca/roadsafety/tp2436/rs200803/menu.htm.

In order to get a better sense for how low-speed vehicles would perform in a collision, Transport Canada is undertaking safety assessments, including crash tests of LSVs. We will await these results and this information will be used in our evaluation of LSVs.

Many people aren't necessarily aware of this, but many crashes in Ontario occur on lower-speed roads. In the three-year period between 2003-2005, the number of serious injuries and fatalities totaled 3,440 and 411 respectively for vehicle occupants and pedestrians on Ontario's roads with maximum posted speed limits of 30, 40, and 50 km/h. These incidents represent 31.2 per cent of serious injuries and 17.2 per cent of fatalities on ALL roads for those road users over that time period.

We've heard from people who think that LSVs have the same safety features as conventional passenger cars, the only difference being that they're electrically powered. In reality, there are major safety differences between LSVs and passenger cars – differences that could cost the LSV driver or passenger serious injury or loss of life.

The Ontario government is committed to improving the quality of the air we breathe. Recently, the province launched its Next Generation of Jobs Fund, which provides $1.15 billion to help innovative companies create well-paying, sustainable jobs, including those that support Ontario's Go Green Plan by reducing energy consumption and carbon emissions. This is in addition to the substantial investments of more than $1 billion that the Ontario government has made in recent years to encourage the manufacture of cleaner/greener cars and other products to curb climate change.

Cars that are both "green" and safely designed are the vehicles we want on our roads.

That said, the ministry continues to look for ways to enhance the sustainability of our transportation system and welcomes further opportunities to work together with public and private stakeholders. Please contact Elizabeth Kay-zorowski, Manager of the Sustainable Transportation Policy Office at 416-585-7270 in this regard.

Sincerely,

for Linda McAusland
Director

C: Bruce Bowes, P.Eng, Chief Corporate Officer
Sarah Gingrich, Business & Development Analyst